

# PC

## MS-DOS 3.30 Reference Manual Volume II

Worldwide  
Information  
Systems

Bull





## Appendix A COMMAND FORMAT SUMMARY TABLES

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The following tables summarize the five major types of MS-DOS commands discussed in this manual:

- Table A-1 contains a list of the MS-DOS commands. The use of these commands is described in Sections 1 and 2. Each command is explained in detail in Section 3.
- Table A-2 contains the Batch commands. The use of these commands is described in the *MS-DOS User's Guide* (Order No. HU94). Each command is explained in detail in Section 3.
- Table A-3 contains the Configuration commands. The use of these commands is described in Section 8. Each command is explained in detail in Section 3.
- Table A-4 contains the EDLIN commands. The use of these commands is described in Section 5.
- Table A-5 contains the DEBUG commands. The use of these commands is described in Section 7.

Each of these tables contains the Name, Purpose, and Format of each command.



Table A-1. MS-DOS Commands (Sheet 1 of 8)

Name	Purpose/Format
APPEND	<p>Set a search path for files without .EXE, .COM, and .BAT extentions.</p> <p>[d:][pathname]APPEND d:pathname [;[d:]pathname...]</p> <p>or</p> <p>[d:][pathname]APPEND [/X][/E]</p>
ASSIGN	<p>Assign an alternate disk drive</p> <p>[d:][pathname]ASSIGN [d1[=]d2[...]]</p>
ATTRIB	<p>Set or remove the read-only or the archive attribute of a file</p> <p>[d:][pathname]ATTRIB [+R   -R] [+A   -A] [d1:][pathname1]filename1[.ext1]</p>
AUTOEXEC.BAT	<p>A file containing a series of DOS commands for batch processing (also batch commands ECHO, FOR, GOTO, IF, PAUSE, REM, SHIFT)</p>
BACKUP	<p>Back up files from one disk to another</p> <p>[d:][pathname]BACKUP d1:[pathname1][filename1[.ext1]] d2: [/S] [/M] [/A] [/D:date] [/T:time] [/F] [/L:[d:][pathname]filename]]</p>
CHCP	<p>Select the code page for DOS to use for as many devices as possible</p> <p>To display current code page: [d:][pathname] CHCP</p> <p>To change to another code page: [d:][pathname] CHCPnnn</p>
CHDIR (CD)	<p>Change current working directories or report the current (working) directory</p> <p>CHDIR [d:][pathname]</p>



Table A-1. MS-DOS Commands (Sheet 2 of 8)

Name	Purpose/Format
CHKDSK	Scan the default or specified disk drive and checks status and disk errors  [d:][pathname]CHKDSK [d1:][filename1[.ext1]] [/F] [/V]
CLS	Clear the screen  CLS
COMMAND	Invoke a secondary version of the command processor  COMMAND [d:][pathname] [/P] [/C string] [/E:nnnnn]
COMP	Compare two files or sets of files, and compare their differences  [d:][pathname]COMP [d1:][pathname1][filename1[.ext1]] [d2:][pathname2][filename2[.ext2]]
CONFIG.SYS	A file containing commands to configure the DOS system (BREAK, BUFFERS, COUNTRY, DEVICE, FCBS, FILES, LASTDRIVE, SHELL, STACKS)
COPY	Copy specified file(s) to the same or another disk  COPY [d1:][pathname1]filename1[.ext1] [/A] [/B] [d2:][pathname2][filename2[.ext2]] [/A] [/B] [/V]
CTTY	Change the input device  CTTY AUX   COM1   COM2   COM3   COM4   CON
DATE	Display or set the date  DATE [mm-dd-yy]



Table A-1. MS-DOS Commands (Sheet 3 of 8)

Name	Purpose/Format
DEL	Delete specified files  DEL [d:][pathname]filename[.ext]  DEL [d:]pathname
DIR	List the file names in a directory  DIR [d:][pathname][filename[.ext]] [/P] [/W]
DISKCOMP	Compare entire diskettes  [d:][pathname]DISKCOMP [d1: [d2:]] [/1] [/8]
DISKCOPY	Copy entire diskettes  [d:][pathname]DISKCOPY [d1: [d2:]] [/1]
ERASE	Delete all specified files  ERASE [d:][pathname]filename[.ext]  or  ERASE [d:]pathname
EXE2BIN	Convert an .EXE file to a memory image .COM or .BIN file  [d:][pathname]EXE2BIN [d1:][pathname1]filename1[.ext1] [d2:][pathname2][filename2[.ext2]]
EXIT	Exit a secondary command processor  EXIT
FASTOPEN	Memory resident program that holds a copy of a drive's directory structure  [d:][pathname] FASTOPEN d:[=nnn]...



Table A-1. MS-DOS Commands (Sheet 4 of 8)

Name	Purpose/Format
FDISK	Create DOS partitions on a hard disk, and perform a variety of hard disk tasks  [d:][pathname] FDISK
FIND	Search for a specific string of text in one or more files, and display each occurrence of the string  [d:][pathname]FIND [/V] [/C] [/N] "string" [[d1:][pathname1]filename1[.ext1]...]
FORMAT	Format a disk for DOS files  [d:][pathname]FORMAT [d1:] [/S] [/V] [/1] [/4] [/8] [/B] [/N:xx] [/T:yy]
GRAFTABL	Load a table of additional character data into memory  [d:][pathname]GRAFTABL [437 860 863 865 /STATUS /?]
GRAPHICS	Enable a print of a graphics screen display on a printer  [d:][pathname]GRAPHICS [color1][color4][color8][compact][graphics]] [/R] [/B] [LCD]
JOIN	Assign a disk drive to another drive and pathname  [d:][pathname]JOIN  or  [d:][pathname]JOIN [d1: d2:\directory]  or  [d:][pathname]JOIN [d1: /D]



Table A-1. MS-DOS Commands (Sheet 5 of 8)

Name	Purpose/Format
JOIN	Assign a disk drive to another drive and pathname [d:][pathname]JOIN or [d:][pathname]JOIN [d1: d2:\directory] or [d:][pathname]JOIN [d1: /D]
KEYB	Replace the keyboard program that is part of ROM BIOS [d:][pathname]KEYB [xx[, [yyy], [[d:][path]filename[.ext]]]]
LABEL	Label a disk [d:][pathname]LABEL [d1:][volume label]
MKDIR (MD)	Create a subdirectory on a disk MKDIR [d:][pathname]
MODE	Define peripheral interfaces and code pages See description
MORE	Display screen output page by page [d:][pathname]MORE
NLSFUNC	Provide support for extended country information [d:][pathname]NLSFUNC [[d:][pathname]filename[.ext]]

Table A-1. MS-DOS Commands (Sheet 6 of 8)

Name	Purpose/Format
PATH	Set a search path for locating external DOS commands  PATH [[d1:]pathname1[[;[d2:]pathname2]...]]  PATH ;
PRINT	Print a text file on a printer (background printing)  [d:][pathname]PRINT [/D:device] [/B:buffsize] [/U:busyticks] [/M:maxticks] [/S:timeslice] [/Q:queuesize] [/T] [/C] [/P] [[d1:][pathname]filename1[.ext1]...]
PROMPT	Change the DOS prompt  PROMPT [prompt-text]
RECOVER	Recover a file or disk with bad sectors  [d:][pathname]RECOVER [d1:][pathname1]filename1[.ext1]  or  [d:][pathname]RECOVER d1:
RENAME (REN)	Rename a file  RENAME [d:][pathname]filename1[.ext1] filename2[.ext2]
REPLACE	Update previous versions of files  [d:][pathname]REPLACE [d1:][pathname1]filename[.ext] [d2:][pathname2] [/A] [/D] [/P] [/R] [/S] [/W]



Table A-1. MS-DOS Commands (Sheet 7 of 8)

Name	Purpose/Format
RESTORE	Restore files from a backup disk to another disk  [d:][pathname]RESTORE d1: [d2][pathname2][filename2[.ext2]] [/S] [/P] [/B:date] [/A:date] [/E:time] [/L:time] [/M] [/N]
RMDIR (RD)	Remove an empty directory  RMDIR [d:][pathname]
SELECT	Copy DOS with the selected international keyboard, date, time, numeric delimiter, and currency formats  [d:][pathname]SELECT [A: B:] [d2:][pathname] [ccc] [kk]
SET	Set the value of a variable for DOS  SET [string1]=[string2]
SHARE	Install file sharing and locking for networks  [d:][pathname]SHARE [/F:ssss] [/L:ll]
SORT	Sort input data and send it to output  [d:][pathname]SORT [/R] [/+n]
SUBST	Substitute a virtual disk drive alias for a pathname  [d:][pathname]SUBST  [d:][pathname]SUBST [d1: d2:pathname2]  or  [d:][pathname]SUBST [d1: /D]

Table A-1. MS-DOS Commands (Sheet 8 of 8)

Name	Purpose/Format
SYS	Transfer DOS hidden system files to the specified disk drive  [d:][pathname]SYS d1:
TIME	Display or set the time  TIME [hh:mm[:ss[.cc]]]   [hh:mm[:ss[,cc]]]
TREE	Display all directory paths and subdirectory names on a disk  [d:][pathname]TREE [d1:] [/F]
TYPE	Display contents of a text file on the screen  TYPE [d:][pathname]filename[.ext]
VER	Display the DOS version number  VER
VERIFY	Verify data when written to disk  VERIFY [ON   OFF]
VOL	Display the volume label for a disk  VOL [d:]
XCOPY	Copy files and entire directory trees  [d:][pathname]XCOPY [d1:][pathname1][filename1[.ext1]] [d2:][pathname2][filename2[.ext2]] [/A] [/D:date] [/E] [/M] [/P] [/S] [/V] [/W]



Table A-2. Batch Commands

Name	Purpose/Format
CALL	Allow a batch file to call another batch file  CALL [d:][pathname]filename
ECHO	Turn DOS message display on or off during batch file processing  ECHO [ON   OFF   message]
FOR..IN..DO..	Allow repetitive execution of DOS commands  FOR %%variable IN (list) DO command [%%variable]
GOTO	Change the sequence of execution for batch file statements  GOTO label
IF	Conditionally execute a DOS or batch command during batch file processing  IF [NOT] condition command
PAUSE	Pause for input during batch file processing  PAUSE [message]
REM	Display a message during batch file processing  REM [message]
SHIFT	Increase the number of replaceable parameters for a batch file  SHIFT

Table A-3. Configuration Commands (Sheet 1 of 2)

Name	Purpose/Format
BREAK	Allow more frequent tests for <Ctrl-Break> or <Ctrl-C>  BREAK=[ON   OFF]
BUFFERS	Specify the number of storage buffers in memory  BUFFERS=nn
COUNTRY	Select date, time, capitalization, collating sequence, folding format, and currency formats for a specific country  COUNTRY=ccc[ddd]
DEVICE	Define device driver files and load files when DOS is loaded  DEVICE=[d:][pathname]filename[.ext]  The following device drivers are supported:  ANSI.SYS        Defines the extended display and keyboard driver  DISPLAY.SYS    Allows implementation of code page switching on displays  DRIVER.SYS     Allows support of an external disk  EMMDRV.SYS     Supports expanded memory, using the LIM EMS standard  PRINTER.SYS    Provides support for code page switching on a printer  RAMDRIVE.SYS   Sets up a virtual disk, using the LIM standard  SMARTDRV.SYS   Disk caching utility to improve performance when using expanded or extended memory  VDISK.SYS      An area of memory that you can store files in, and read files from, as though it was a physical disk drive



Table A-3. Configuration Commands (Sheet 2 of 2)

Name	Purpose/Format
FCBS	Specify the number of file control blocks open at the same time  FCBS=xxx,yyy
FILES	Specify the number of files open at the same time  FILES=nnn
LASTDRIVE	Define the number of installed disk drives  LASTDRIVE=x
SHELL	Load a specified alternate command processor file instead of command.COM  SHELL=[d:][pathname]filename[.ext][/E:eeeeee][/P]
STACKS	Allocate the number and size of system stacks for interrupt processing  STACKS=nn,sss

Table A-4. EDLIN Commands (Sheet 1 of 2)

Name	Purpose/Format
line-number	Enter edit mode at given (or next) line number  [line]
A(PPEND)	Add the specified number of lines from disk to the file being edited in memory  [n]A
C(OPY)	Copy a range of lines, within the text, ahead of the specified line number  [line1],[line2],line3[,count]C
D(ELETE)	Delete a range of lines  [line1][,line2]D
E(ND)	End the editing session and save the edited file on disk  E
I(NSERT)	Enter insert mode before given (or current) line number  [line]I
L(IST)	List a range of lines  [line1][,line2]L
M(OVE)	Move a range of lines within the text, ahead of the specified line number  [line1],[line2],line3M
P(AGE)	Page through the text  [line1][,line2]P



Table A-4. EDLIN Commands (Sheet 2 of 2)

Name	Purpose/Format
Q(UIT)	Quit the editing session, without saving the edited file  Q
R(EPLACE)	Replace all occurrences of one string with another, in the specified range  [line1][,line2][?]R[string1][<F6>string2]
S(EARCH)	Search a specified range of lines for a string of text  [line1][,line2][?]S[string]
T(RANSFER)	Inserts (merges) the contents of another file into current file at the current line  [line]T[d:]filename[.ext]
W(RITE)	Write a specified number of lines to disk from the file being edited in memory  [n]W

Table A-5. DEBUG Commands (Sheet 1 of 2)

Name	Purpose/Format
ASSEMBLE	Assemble source programs in memory  A[<address>]
COMPARE	Compare a portion of memory specified by range to a portion of memory of the same size beginning at address  C<range> <address>
DUMP	Display the contents of memory of the specified range  D[<range>]
ENTER	Enter byte values into memory at the specified address  E<address>[ <list>]
FILL	Fill memory at the addresses specified in the range with values specified in the list  F<range> <list>
GO	Execute a program in memory  G[=<address>][ <address>...]]
HEX	Perform hexadecimal arithmetic on two parameters specified, and display results  H<value> <value>
INPUT	Input and display one byte from a port address specified by value  I<value>
LOAD	Load a file into memory  L[<address> [<drive> <record> <record>]]
MOVE	Move the block of memory specified by range to the location specified by address  M<range> <address>

Table A-5. DEBUG Commands (Sheet 2 of 2)

Name	Purpose/Format
NAME	Name files  N [[d:][pathname]filename[.ext]...]
OUTPUT	Send the byte specified to an output port address specified by value  O<value> <byte>
PROCEED	Cause instructions in the call, loop, interrupt or repeat string to execute normally, and return control to DEBUG on completion of the instructions.  P[<=address>][ <value>]
QUIT	Terminate DEBUG  Q
REGISTER	Display contents of registers  R[<register-name>]
SEARCH	Search the range specified for the byte specified in the list  S<range> <list>
TRACE	Execute one instruction and display the contents of all registers, and flag the decoded instruction  T[=<address>][ <value>]
UNASSEMBLE	Disassemble bytes, and display the source statement that corresponds to them  U[<range>]
WRITE	Write a file being debugged to a disk file  W[<address>[ <drive> <record> <record>]]



**Appendix B**  
**BUYING AND**  
**INSTALLING**  
**DOS SOFTWARE**

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In this appendix:	See page
Making the Right Purchase.....	B-2
Installing the Software.....	B-3

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## MAKING THE RIGHT PURCHASE

Your PC with DOS is highly flexible. It can accommodate all MS-DOS compatible application and programming language software, as well as virtually all software compatible with IBM PC-DOS.

When you purchase software:

- Ask if the software is formatted for MS-DOS and your PC.
- If the software is not available on an MS-DOS diskette formatted for your PC, ask if it is available on a PC-DOS compatible diskette. Depending on the diskette drives in your system, your PC can use:
  - a. A standard 5-1/4 inch diskette with 160, 180, 320, or 360 KB capacity.
  - b. A high-density 5-1/4 inch diskette with 1.2 MB capacity.
  - c. A double-sided 3-1/2 inch diskette with 720 KB capacity.
  - d. A high capacity 3-1/2 inch diskette with 1.44 MB capacity.
- 3. Most application packages and some language software require an installation program to interact with your specific system. Ask if the software can be readily installed on a PC, or if the package includes an installation program.

## INSTALLING THE SOFTWARE

To fully use every feature on your PC, application software must be tailored to, or installed on, your computer.

Installation procedures are different for each application, so every "off the shelf" package contains its own installation program. The documentation for the application describes the installation procedures.

Before you customize applications, you should make an authorized copy of purchased diskettes, and use the copies as your working diskettes. (Refer to the FORMAT and DISKCOPY commands in Section 3.) Save original diskettes in a safe place, and use them only to make copies.

The functions on your keyboard are useful when you operate third-party software and application programs. Table B-1 provides a list of some of these keyboard functions (refer also to Section 4).

Table B-2 is an ASCII code chart, included for convenient reference.



Table B-1. Keyboard Functions (Sheet 1 of 2)

Keys	Description
F1	Copies one designated character.
F2X	Copies up to designated character.
F3	Copies (remainder of) a line.
F4X	Skips up to designated character.
F5	Inserts an @ and moves cursor down one line to column 1.
F6	End-of-file marker (Ctrl-Z).
F7-10	Programmable function keys.
Shift F1-10	Programmable function keys F11 to F20.
Ctrl F1-10	Programmable function keys F21 to F30.
Alt F1-10	Programmable function keys F31 to F40.
→	Tabs to right.
←	Tabs to left.
Ctrl C	Aborts current command.
Ctrl H	Removes last character from command line.
Ctrl J	Inserts physical end of line.
Ctrl P	Prints/ends print of keyboard output.
Ctrl S	Suspends display of output to console.
Ctrl Home	Clears screen; returns cursor to home.
Ctrl End	Deletes remainder of line.
Ctrl PgUp	Goes to top of file in text-editors.
Ctrl PgDn	Deletes remainder of screen.
Ctrl	Scrolls right.
Ctrl	Scrolls left.

Table B-1. Keyboard Functions (Sheet 2 of 2)

Keys	Description
Ctrl NumLock	Suspends operations.
Ctrl BREAK	Aborts current command.
Ctrl PrtSc	Prints/ends print of screen.
←	Backs cursor up one space and deletes character occupying space (<Backspace>).
↵	Moves cursor to start of next line (<ENTER>).
Esc	Cancels current line. Also leaves current screen in certain applications.
PrtSc	Prints screen contents.
Ins	Enters/exits insert character mode.
Del	Deletes a character within text editor.
Home	Returns cursor to line 1, column 1. Also, returns to main menu in some applications.
End	Goes to end of line/text in some text editors.
PgUp	Scrolls up 25 lines.
PgDn	Scrolls down 25 lines.
↑	Moves the cursor up one line.
→	Moves the cursor to the right one character.
↓	Moves the cursor down one line.
←	Moves the cursor to the left one character.
Scroll-Lock	Scrolls up one screen.
Scroll-Lock	Scrolls right one screen.
Scroll-Lock	Scrolls down one screen.
Scroll-Lock	Scrolls left one screen.
Ctrl-Alt-Del	Restarts DOS (reboot, warm start).

Table B-2. ASCII Code Chart

ASCII CODE CHART																	
<div><div>B<sub>4</sub>—B<sub>1</sub></div><div>→</div></div> <div><div>B<sub>8</sub>↕B<sub>5</sub></div></div>		0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0000	0	NUL	SOH	STX	ETX	EOT	ENQ	ACK	BEL	BS	HT	LF	VT	FF	CR	SO	SI
0001	1	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
0010	2	☐	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
0011	3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
0100	4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0101	5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
0110	6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
0111	7	p	q	r	s	t	u	v	w	x	y	z	{		}	~	DEL

88-748



# Appendix C

## INTERNATIONAL

## KEYBOARD

## CONSIDERATIONS

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In this appendix:	See page
Dead Key Combinations.....	C-2
Front Face Keystrokes.....	C-2

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This appendix provides information on international keyboard support.

### **DEAD KEY COMBINATIONS**

International keyboards use "dead" keys to provide diacritical marks on alphabetic characters. These keys do not produce characters unless you use them in combination with another key.

To "build" an accented character:

1. Press and release the accent key.
2. Press the key for the character you are accenting (Spanish, French, etc.).

To enter the accent character by itself:

1. Press and release the accent key.
2. Press the space bar.

Table C-1 lists the valid dead key combinations for the supported countries.

### **FRONT FACE KEYSTROKES**

Some international keyboards have keys with "front face" characters. The following keystroke combinations are used to enter these characters:

- French Canadian Keyboard:
  1. Press and hold <Shift-Alt>.
  2. Press and release the key with the front face character.
  3. Release <Ctrl-Alt>.
- All other non-U.S. keyboards with front face characters:
  1. Press and hold <Ctrl-Alt>.
  2. Press and release the key with the front face character.
  3. Release <Ctrl-Alt>.

Germany:  
áéÉíóú àèìòù

France:  
äÅëïöŒüŸ âéîôû

Spain:  
äÅëïöŒüŸ áéÉíóú  
àèìòù âêîôû

UK:  
dead key not supported

Italy:  
dead key not supported

Belgium:  
âêûîô ãëüïöÿÄÜÖ áéúíóÉ àèùìò ñÑ

Denmark:  
éÉáíóú àèìòù âêîôû äÅëïöŒüŸ

Norway:  
éÉáíóú àèìòù âêîôû äÅëïöŒüŸ

Portugal:  
áÄéÉííóóúŮ äÄöŒñÑüŮ àÀèÈììòòùŮ âÂêÊôÔ

Swiss French:  
ñÑ âêîôû àèìòù äëïöüÄËÏÖŸ éÉáíóú

Swiss German:  
ñÑ âêîôû àèìòù äëïöüÄËÏÖŸ éÉáíóú

Sweden:  
éÉáíóú àèìòù âêîôû äÅëïöŒüŸ ñÑ

Finland:  
éÉáíóú àèìòù âêîôû äÅëïöŒüŸ ñÑ

Canada:  
éÉíí àÀèÈùŮ âÂêÊîîôôûŮ äÄëËîîööüŮ çÇ

Table C-1. Dead Key Characters





# Appendix D

## PC SUPPORT UTILITIES

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In this appendix:	See page
FREQ Utility.....	D-2
PARK Utility.....	D-4

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**FREQ UTILITY (for Bull PC AP Series Only)**

## **FREQ UTILITY**

To display the current processor frequency or change it to a specified value.

*TYPE:* External

*FORMAT:* [d:][pathname]FREQ [/L | /H]

*WHERE:* [d:][pathname]

Defines the drive and directory path where the FREQ command can be found. This option is not necessary if the command is in the current directory, or you have previously defined a path to the command.

/L

Changes the processor frequency to LOW

/H

Changes the processor frequency to HIGH

*COMMENTS:* You can use this command with AP, AP-X, and SP Series PCs that support multiple frequencies. Some Bull PCs require unique commands to change the processor frequency. Refer to your PC's Owner's Manual for more information.

When you use the FREQ utility without options, it displays the current processor frequency (LOW or HIGH). For example:

FREQ version x.x

Current frequency is HIGH

If your processor is not switchable, the following error message is displayed:

FREQ version x.x

Nonswitchable processor



If you enter an invalid frequency, the following message is displayed:

FREQ Version x.x

Invalid switch specification " x"

Execution of the FREQ command takes several seconds.

For the SP Series PC, the following screen is displayed when you enter the FREQ command:

This program can also be run by entering the option number after FREQ on the command line -(e.g., FREQ /1, FREQ /6/15).

Available Emulation Options:

1. Auto 16 MHz normal/8 MHz during Flex Disk access
2. High 16 MHz only
3. 8 MHz
4. 6 MHz
5. 4.77 MHz
6. Other Speed
7. Current Setting

< Ctrl-Break > Exit without changes

Press the desired option number and :

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**PARK UTILITY**

**PARK UTILITY**

To "park" the read/write heads on a hard disk in a position that minimizes accidental damage to the disk surface during transport of the PC.

*TYPE:* External

*FORMAT:* [d:][pathname]PARK

*WHERE:* [d:][pathname]

Defines the drive and directory path where the PARK command can be found. This option is not necessary if the command is in the current directory, or you have previously defined a path to the command.

*COMMENTS:* Unlike previous versions of DOS, there is only one form of the PARK command for all Bull PC models.

Before you move a PC, you can protect the hard disk and the information stored on it by relocating the read/write head to an unused portion of the disk.

When you type the PARK command, a screen similar to the following appears:

FIXED DISK PARK UTILITY

The PC will halt after the completion of this utility to position the fixed disk heads prior to movement of your PC.

Hard disk drive # 1:                      Heads parked at cylinder # 615

S Y S T E M     H A L T E D

P L E A S E     P O W E R     O F F

Once you have parked the hard disk heads, turn off your computer. With the heads parked, the PC does not respond to any external device, including the keyboard, until it is restarted.

**Appendix E**  
**DOS 3.30**  
**MASTER DISKETTE**  
**FILES**

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In this appendix:	See page
5-1/4 Inch, 360 KB Diskettes.....	E-2
Drivers Diskette (Volume Label: DOS330S1310).....	E-2
DOS Diskette (Volume Label: DOS330S2310).....	E-2
Options Diskette (Volume Label: DOS330S3310).....	E-3
3-1/2 Inch, 720 KB Diskettes.....	E-3
DOS/Drivers Diskette(Volume Label: DOS330S1220).....	E-3
Options Diskette (Volume Label: DOS330S2220).....	E-3
3-1/2 Inch, 1.44 MB Diskettes.....	E-4
DOS/Drivers/Options Diskette (Volume Label: DOS330S1120).....	E-4

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## DOS 3.30 Master Diskette Files

The DOS 3.30 Master diskette file names are listed on the following pages for the three types of diskettes:

- 5-1/4 inch, 360 KB
- 3-1/2 inch, 720 KB
- 3-1/2 inch, 1.44 MB.

### **5-1/4 INCH, 360 KB DISKETTES**

#### **Drivers Diskette (Volume Label: DOS330S1310)**

ANSI.SYS	NLSFUNC.EXE
COUNTRY.SYS	PRINTER.SYS
COMMAND.COM	REPLACE.EXE
DISPLAY.SYS	SELECT.COM
DRIVER.SYS	SMARTDRV.SYS
FASTOPEN.EXE	SYS.COM
FDISK.COM	VDISK.SYS
FORMAT.COM	XCOPY.EXE
KEYB.COM	5202.CPI
KEYBOARD.SYS	4201.CPI
MODE.COM	EGA.CPI

#### **DOS Diskette (Volume Label: DOS330S2310)**

APPEND.EXE	FORMAT.COM
ASSIGN.COM	LABEL.COM
ATTRIB.EXE	MORE.COM
BACKUP.COM	PRINT.COM
CHKDSK.COM	RECOVER.COM
COMMAND.COM	REPLACE.EXE
COMP.COM	RESTORE.COM
DISKCOMP.COM	SORT.EXE
DISKCOPY.COM	SYS.COM
DOSINS.COM	TREE.COM
FDISK.COM	XCOPY.EXE
FIND.EXE	

**Options Diskette (Volume Label: DOS330S3310)**

DEBUG.COM	GRAPHICS.COM
DRVINS.COM	JOIN.EXE
EDLIN.COM	LINK.EXE
EMMDRV.SYS	PARK.EXE
ENHKEY.COM	RAMDRIVE.SYS
EXE2BIN.EXE	RECOVER.COM
FREQ.COM	SHARE.EXE
GRAFTABL.COM	SUBST.EXE

**3-1/2 INCH, 720 KB DISKETTES**

**DOS/Drivers Diskette (Volume Label: DOS330S1220)**

4201.CPI	FORMAT.COM
5202.CPI	KEYB.COM
ANSI.SYS	KEYBOARD.SYS
APPEND.EXE	LABEL.COM
ASSIGN.COM	MODE.COM
ATTRIB.EXE	MORE.COM
BACKUP.COM	NLSFUNC.EXE
CHKDSK.COM	PRINT.COM
COMMAND.COM	PRINTER.SYS
COMP.COM	RECOVER.COM
COUNTRY.SYS	REPLACE.EXE
DISKCOMP.COM	RESTORE.COM
DISKCOPY.COM	SELECT.COM
DISPLAY.SYS	SMARTDRV.SYS
DOSINS.COM	SORT.EXE
DRIVER.SYS	SYS.COM
EGA.CPI	TREE.COM
FASTOPEN.EXE	VDISK.SYS
FDISK.COM	XCOPY.EXE
FIND.EXE	

**Options Diskette (Volume Label: DOS330S2220)**

DEBUG.COM	GRAPHICS.COM
DRVINS.COM	JOIN.EXE
EDLIN.COM	LINK.EXE
EMMDRV.SYS	PARK.EXE
ENHKEY.COM	RAMDRIVE SYS
EXE2BIN.EXE	RECOVER.COM
FREQ.COM	SHARE.EXE
GRAFTABL.COM	SUBST.EXE

**3-1/2 INCH, 1.44 MB DISKETTES**

**DOS/Drivers/Options Diskette (Volume Label: DOS330S1120)**

4201.CPI	FREQ.COM
5202.CPI	GRAFTABL.COM
ANSI.SYS	GRAPHICS.COM
APPEND.EXE	JOIN.EXE
ASSIGN.COM	KEYB.COM
ATTRIB.EXE	KEYBOARD.SYS
BACKUP.COM	LABEL.COM
CHKDSK.COM	LINK.EXE
COMMAND.COM	MODE.COM
COMP.COM	MORE.COM
COUNTRY.SYS	NLSFUNC.EXE
DEBUG.COM	PARK.EXE
DISKCOMP.COM	PRINT.COM
DISKCOPY.COM	PRINTER.SYS
DISPLAY.SYS	RAMDRIVE.SYS
DOSINS.COM	RECOVER.COM
DRIVER.SYS	REPLACE.EXE
DRVINS.COM	RESTORE.COM
EDLIN.COM	SELECT.COM
EGA.CPI	SHARE.EXE
EMMDRV.SYS	SMARTDRV.SYS
ENHKEY.COM	SORT.EXE
EXE2BIN.EXE	SUBST.EXE
FASTOPEN.EXE	SYS.COM
FDISK.COM	TREE.COM
FIND.EXE	VDISK.SYS
FORMAT.COM	XCOPY.EXE



## Appendix F

# MENU MANAGER AND DOS-HELP FILES

---

The following files are used by the Menu Manager (version 3.3) and DOS-Help (version 3.30). No other files in the root directory of the hard disk can have the same names if the respective utility is installed.

Menu Manager	DOS-Help
*SHELLDRV.SYS	HELP.EXE
*SHELLHLP.DTA	HELPPDIR
*SHELLRES.EXE	HELPPDIR.DCD
*SHELL1.OVR	HELPSCRN
*SHELL2.OVR	
*SHELL3.OVR	
*SHELL4.OVR	
*SHELL5.OVR	
SHELUTIL.COM	
TIME.SYS	
WTIME.COM	
*Hidden Files	



## Appendix G MS-DOS MESSAGES

---

DOS displays three types of messages:

- MS-DOS utility messages
- MS-DOS device error messages
- Application program messages.

This appendix lists DOS utility and device error messages. For information about messages related to application program software, refer to the documentation for the application.

If a disk or device error occurs at any time during a command or program, DOS displays an error message, and includes this prompt:

Abort, Ignore, Retry, Fail?\_

DOS waits for you to enter one of the following responses:

- A Abort. End the program requesting the disk read or write.
- I Ignore. Ignore the bad sector and pretend the error did not occur. This may result in lost data.
- R Retry. Repeat the operation. Use this response when you have corrected the error (for example, with Not ready or Write protect errors).

F Fail. This causes the current DOS system operation to end (fail) and the application to continue.

NOTE: For some diskette device errors, the Ignore option is not displayed. This prompt instead reads:

Abort, Retry, Fail?\_

Usually, you will want to recover by first entering R (to try again). If the second attempt fails, enter A to terminate the process.



**ERROR MESSAGE LISTING**

This following pages describe MS-DOS messages, their causes, and how to correct them. The sources of each message are identified in brackets ([ ]).

Abort edit (Y/N)?  
[Edlin]

DOS displays this message when you choose the Edlin Q (quit) command. The Q command exits the editing session without saving any editing changes.

Enter Y (for Yes) or N (for No).

Access denied  
[ATTRIB][FIND][PRINT][REPLACE][XCOPY]

You tried to replace a write-protected, read-only, or locked file.

Active Code Page: xxx  
[CHCP]

xxx is the code page currently being used by the system.

Active Code Page for device *ddd* is xxx  
[MODE]

xxx is the code page currently being used by the device *ddd*.

Active Code Page not available from con device  
[KEYB]

The code page that the system is currently using is not supported on the console (screen) you are using.

Add filename? (Y/N)  
[REPLACE]

REPLACE displays this prompt if you specify the /W switch.

Enter Y (for Yes) if you want to add the file to the disk, or N (for No) if you do not want to add the file.

Adding filename  
[REPLACE]

REPLACE displays this prompt when it adds a file to your disk.

All files canceled by operator  
[PRINT]

DOS displays this message when you specify the /T switch with the PRINT command.

All logical drives deleted in the Extended DOS Partition  
[FDISK]

Any logical drives previously associated with the extended DOS partition on your disk are now removed.

Allocation error, size adjusted  
[CHKDSK]

The size of the file indicated in the directory was not consistent with the amount of data actually allocated to the file. The file was truncated to match the amount of data allocated.

All specified file(s) are contiguous  
[CHKDSK]

All files are written sequentially on the disk.

To correct this error automatically, specify the CHKDSK /F switch.

**APPEND already installed**  
[APPEND]

You have already used the APPEND command once since you turned on your computer. Now you are trying to use either the /X or /E switch with this command. These switches are only valid the first time you use the APPEND command.

To change the APPEND switch, reboot your computer, and type the APPEND command with the switch you want to use. Otherwise, use the APPEND command without these switches. For more information about the APPEND command, refer to Section 3.

**APPEND/ASSIGN Conflict**  
[APPEND]

You cannot use the APPEND command on an assigned drive.

Cancel the drive assignment before using the APPEND command with this drive again.

**Are you sure (Y/N)?**  
[MS-DOS]

DOS displays this message if you try to delete all files in the working directory by using the \*.\* wildcard.

Enter Y (for Yes) to delete all the files, or N (for No).

**Attempted write-protect violation**  
[FORMAT]

The disk you are trying to format is write-protected.



**\*\*\* Backing up files to drive x: \*\*\***

Diskette number: n  
[BACKUP]

BACKUP displays this message while backing up files to the specified drive.

Be sure to label backup disks with the appropriate backup disk number for use in restoring them later.

**Bad call format reading (or writing) drive x:**  
[MS-DOS device error]

The length of the request header passed to the device header was incorrect

**Bad command error reading (or writing) drive x:**  
[MS-DOS device error]

A device driver issued an incorrect command to the device specified in the error message.

**Bad command or file name**  
[MS-DOS]

The command cannot find the program you asked it to run

Check to see that you typed the command line properly, and that the file or command is on the disk or in the command path.

**Bad or missing Command Interpreter**  
[MS-DOS]

DOS cannot find the COMMAND.COM file on the disk. Either the file is missing from the root directory, or the file is invalid. You also receive this message if COMMAND.COM has been moved from the directory it was originally in when you started DOS.

Either restart the system with a diskette that contains the COMMAND.COM file, or copy the COMMAND.COM file from your backup MS-DOS master diskette onto the diskette used to start DOS.

## MS-DOS Messages

---

### Bad or missing filename [MS-DOS]

You specified a device incorrectly in the CONFIG.SYS file.

Check the accuracy of the DEVICE command in the CONFIG.SYS file.

### Bad or Missing Keyboard definition file [KEYB]

DOS cannot find the KEYBxx file that you specified with the KEYB command.

Check to see that the file you specified exists on the disk. Also check to see that your path includes the directory in which this file resides. Then, retype the command. If this message is displayed again, the KEYBOARD.SYS or KEYBOARD.COM file may be corrupted.

### Bad Partition Table [Format]

This message indicates that there is no DOS partition on the hard disk.

You must run FDISK to create a DOS partition on your hard disk.

### Bad unit error reading drive x: [MS-DOS device error]

Invalid subunit numbers were passed to the device driver.

### BREAK is off (or on) [MS-DOS]

This message indicates the current setting of BREAK.

Cannot CHDIR to path - tree past this point not processed  
[CHKDSK]

CHKDSK is checking the structure of the directory, and is unable to go to the specified directory. All subdirectories underneath this directory will not be verified.

To correct this error automatically, specify the CHKDSK /F switch.

Cannot CHDIR to root  
[CHKDSK]

CHKDSK is checking the tree structure of the directory, and is unable to return to the root directory. CHKDSK is not able to continue checking the remaining subdirectories.

Try to restart DOS. If this error persists, the disk is unusable.

Cannot CHKDSK a Network drive  
[CHKDSK]

You cannot check drives that are redirected over the network.

Cannot CHKDSK a SUBSTed or ASSIGNED drive  
[CHKDSK]

You cannot check drives that have been substituted or assigned.

Cannot COPY from (or to) a reserved device  
[XCOPY]

You cannot copy files from or to a device.

Cannot create extended DOS partition while logical drives exist  
[FDISK]

Your disk has one or more logical drives assigned to it. These must be deleted before you can create an extended DOS partition.

Delete all logical drives using FDISK. Then, create the extended DOS partition.

Cannot create extended DOS partition without primary DOS  
partition on disk 1  
[FDISK]

You are trying to create an extended DOS partition,  
but your first hard disk does not contain a primary  
DOS partition.

First, create the primary DOS partition on your  
first hard disk. Then, if you have more room on  
that disk, or if you have a second hard disk, you  
can create an extended DOS partition.

Cannot create a zero cylinder partition  
[FDISK]

You are trying to create a partition with a size of  
zero cylinders.

You must allocate a minimum of one cylinder to any  
partition you create.

Cannot create Subdirectory BACKUP on drive x:  
[BACKUP]

The disk can be write-protected, full, or the  
backup subdirectory may already exist and be  
read-only.

Use another disk as a target disk.

Cannot DISKCOMP to or from an ASSIGNED or SUBSTed drive  
[DISKCOMP]

One of the drives that you specified is a drive  
that you created using the ASSIGN or SUBST command.

Cannot DISKCOPY to or from an ASSIGNED or SUBSTed drive  
[DISKCOPY]

You cannot copy disks to or from drives that have  
been redirected over the network.



**Cannot do binary reads from a device**  
[COPY]

The copy cannot be done in binary mode when you are copying from a device.

You should either not use the /B switch, or you should use the /A switch to specify an ASCII copy.

**Cannot edit .BAK file-rename file**  
[Edlin]

You attempted to edit a file that has a file name extension of .BAK (a backup copy created by Edlin).

To edit a file that has an extension of .BAK, you must either rename or copy the file, and give it a different extension.

**Cannot exec BASICA.COM**  
[MS-DOS]

BASICA cannot be executed by DOS

Check to see that the BASICA.COM file is on the disk you are using. If BASICA.COM is not in your working directory, make sure that the PATH command points to the directory in which it is located. Try executing BASICA again. If the same message appears, the file itself may be bad. Try restoring BASICA.COM from backup.

**Cannot format an ASSIGNED or SUBSTed drive**  
[FORMAT]

You attempted to format a drive currently mapped to another drive by the ASSIGN or SUBST command.

Run ASSIGN or SUBST again, and clear all drive assignments.

**Cannot FORMAT a Network drive**  
[FORMAT]

You cannot format drives that are redirected over the network.

Cannot FORMAT nonremovable drive x:  
[BACKUP]

You are trying to back up files with the /F switch. DOS will not allow you to format the target disk specified.

Be sure you want to back up files to a hard disk. If you do, you must use a hard disk that is formatted already.

Cannot JOIN a Network drive  
[JOIN]

You cannot join drives that are redirected over the network.

Cannot LABEL a Network drive  
[LABEL]

You cannot label a drive that is shared on a network server station.

Cannot LABEL a SUBSTed or ASSIGNED drive  
[LABEL]

You cannot label a drive if it has been substituted with the SUBST command or assigned with the ASSIGN command.

Check the command line to be sure you specified a valid file name.

Cannot perform a cyclic copy  
[XCOPY]

When you are using the /S switch, you cannot specify a target that is a subdirectory of the source.

Cannot recover . entry, processing continued  
[CHKDSK]

The . entry (working directory) is defective and cannot be recovered.

Cannot recover .. entry,  
Entry has a bad attribute (or link or size)  
[CHKDSK]

The .. entry (parent directory) is defective and cannot be recovered.

If you have specified the /F switch, CHKDSK tries to correct the error automatically.

Cannot RECOVER a Network drive  
[RECOVER]

You cannot recover files on drives that are redirected over the network.

Cannot SUBST a Network drive  
[SUBST]

You cannot substitute drives that are redirected over the network.

Cannot SYS to a Network drive  
[SYS]

You cannot transfer the system files to drives that are redirected over the network.

For more information about the NET PRINT command, refer to the *Microsoft Networks User's Guide*.

Cannot use FASTOPEN for drive x:  
[FASTOPEN]

FASTOPEN works only with local, fixed disks, and can work with a maximum of four disks at a time. You may be trying to use FASTOPEN over a network, with a diskette, or with more than four disks at one time, none of which is possible with FASTOPEN.

Cannot use PRINT - Use NET PRINT  
[PRINT]

You must use the NET PRINT command to print files.

CHDIR .. failed, trying alternate method  
[CHKDSK]

When checking tree structure, CHKDSK was not able to return to a parent directory. It will try to return to that directory by starting over at the root and searching again.

xxxxxxx code page drive cannot be initialized  
[MS-DOS]

DOS cannot start either the PRINTER.SYS or DISPLAY.SYS program.

Check the device command line in your CONFIG.SYS file. You probably included an illegal parameter. For more information, refer to Appendix C in the *MS-DOS User's Guide* (Order No. HU94).

Code page not prepared  
[MODE]

You have selected a code page that has not been prepared for the system, or one that does not have the correct font to support the current video mode.

To prepare a code page for the system, use the MODE PREPARE command. If you have installed the DISPLAY.SYS installable device driver, be sure the DEVICE command line in your CONFIG.SYS file allows for additional subfonts. For more information, refer to Appendixes B and C, in the *MS-DOS User's Guide* (Order No. HU94).

Code page xxx not prepared for all devices  
[CHCP]

CHCP is unable to select a code page for the system.

First, make sure that the NLSFUNC is installed. If you have not used the DEVICE command in your CONFIG.SYS file to install device drivers, you may now retry the CHCP command. If you are using installable device drivers with your system, you must use the MODE PREPARE command to prepare the specific code page for each device on your system. Then, retype the CHCP command.



Code page operation not supported on this device  
[MODE]

You have specified a device and code page combination which DOS does not recognize as valid.

Check to see that the device you specified exists, and that you have listed a valid code page. Also, check to see that the code page is supported on that device.

Code page requested xxx is not valid for given keyboard code  
[KEYB]

The keyboard code and code page specified are not compatible.

Retype the KEYB command with a compatible keyboard code and code page.

Code page specified has not been designated  
[KEYB]

You have typed the KEYB command with an option the system does not recognize. You must first prepare the associated code page for your monitor (console screen device).

Use the MODE PREPARE command to prepare the associated code page for CON. Then, retype the KEYB command.

Code page specified has not been prepared  
[KEYB]

You have typed the KEYB command with an option the system does not recognize. You must first prepare the associated code page for your monitor (console screen device).

Use the MODE PREPARE command to prepare the associated code page for CON. Then, retype the KEYB command.

**Code page specified is inconsistent with invoked code page  
[KEYB]**

This message indicates that the KEYB option you have selected does not coincide with the code page for your monitor (console screen device (CON)).

Use the MODE SELECT command if you also want to change the code page for CON.

**Code page specified is inconsistent with selected code page  
[KEYB]**

This message indicates that the KEYB option you have selected does not coincide with the code page for your monitor (console screen device (CON)).

Use the MODE SELECT command if you also want to change the code page for CON.

**Code page xxx  
[MODE]**

This message indicates the code page currently being used by the device specified.

**Code pages cannot be prepared  
[MODE]**

You have either specified a duplicate code page for this device, or tried to prepare more than the total number of code pages supported for this device.

Check the DEVICE command line in your CONFIG.SYS file to see how many prepared code pages are allowed for this device. Use the /STATUS option of the MODE command to find out which code pages are already prepared for this device. For more information, refer to Appendix B in the *MS-DOS User's Guide* and Section 3 in this manual.

Compare another diskette (Y/N)?  
[DISKCOMP]

DISKCOMP displays this message when it has completed its comparison of the disks.

Enter Y (for Yes) to compare more disks, and N (for No) to end the compare.

Compare error on *disk* side *s*, track *t*  
[DISKCOMP]

DISKCOMP found a difference on the disk in the specified drive, side *s*, track *t*.

Compare OK  
[DISKCOMP]

DISKCOMP displays this message if the disks are identical.

Compare process ended  
[DISKCOMP]

DISKCOMP displays this message if a fatal error occurred during the comparison.

Comparing *t* tracks  
*n* sectors per track, *s* side(s)  
[DISKCOMP]

This message confirms the format of the disks that you are comparing.

COM port does not exist  
[MODE]

You have specified an invalid COM port.

Contains *n* non-contiguous blocks  
[CHKDSK]

The disk contains fragmented files.

To copy this disk, use the COPY or XCOPY command instead of the DISKCOPY command. The new copy then stores the new files sequentially.

Content of destination lost before copy  
[COPY]

The source file that you specified in the COPY command was overwritten before the copy process completed.

Refer to the COPY command description in Section 3 for the proper syntax.

Convert lost chains to files (Y/N)?  
[CHKDSK]

CHKDSK displays this message if it finds information on the disk that is not allocated properly in the disk's File Allocation Table (FAT).

If you enter Y (for Yes), CHKDSK recovers the lost blocks it found when checking the disk. CHKDSK, then creates a proper directory entry and a file for each lost chain with a file name of the form: FILENNNN.CHK. If you enter N (for No), CHKDSK frees the lost blocks so that they can be reallocated and does not recover any lost data that was in those lost blocks.

Copy another diskette (Y/N)?  
[DISKCOPY]

The DISKCOPY command has completed processing.

Enter Y (for Yes) to copy another diskette, or enter N (for No) to end copying.

Copying *t* tracks *n* Sectors/Track, . *s* Sides  
[DISKCOPY]

DISKCOPY displays this message during copying.

Copy process ended  
[DISKCOPY]

DISKCOPY could not copy the entire disk.

Use the COPY or XCOPY command to copy specific files onto the disk.



Copyright 1981,82,83,84,85,86,87 Microsoft Corp.  
[MS-DOS]

This message appears on most MS-DOS utility and command banners.

Corrections will not be written to disk  
[CHKDSK]

There are errors on the disk, but CHKDSK will not correct them because you did not specify the /F switch.

You must specify the /F switch to correct disk errors.

Current code page settings  
[MODE]

This message shows current and prepared code pages for the device specified and for the system.

Current date is *mm-dd-yy*  
[DATE]

The DATE command displays this message.

Enter the correct date, and press the <ENTER> key.

Current keyboard code: *xx* code page: *yyy*  
Current CON code page: *zzz*  
[KEYB]

This message shows the current keyboard code and its associated code page, and the current code page used by your console screen device (CON).

Current keyboard does not support this code page  
[KEYB]

The code page selected is not compatible with the current keyboard code.

Check the code page you have selected. If it is correct, change the keyboard code with the KEYB command.

## MS-DOS Messages

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Current time is *hh:mm:ss:hh*  
[TIME]

The TIME command displays this message.

Enter the correct time, and press the <ENTER> key.

Data error reading drive *x*:  
[MS-DOS device error]

DOS could not read the data from the disk properly. This is often due to a defective disk.

Enter R (for Retry) several times, or enter A (for Abort) to end the program. (It is a good idea to make a new copy of the disk. If it is defective, you may lose information.)

Delete current volume label (Y/N)?  
[LABEL]

If a current volume label exists, LABEL displays this message in response to the prompt to enter the new volume label for this disk.

If you want to delete the volume label, enter Y (for Yes), or enter N (for No).

xxxxxxx device driver cannot be initialized  
[MS-DOS]

You are trying to install a device driver by using a DEVICE command line in your CONFIG.SYS file. The syntax on that command line is incorrect.

Refer to Appendix C in the *MS-DOS User's Guide* (Order No. HU94) for the correct syntax of DOS installable device drivers.

### Device Error during Status [MODE]

DOS found an error with the specified device when it was checking the status of that device. The problem may be due to a device that does not support code pages, a device that cannot support more code pages than those already prepared, or a device with a bad or irregular font file.

Check the DEVICE command line in your CONFIG.SYS file. Make sure that the command syntax and limits for subfonts and additional code pages are all correct. Also check to see if your device supports code page switching. Consult the hardware vendor if your are unsure.

### Device Error during Prepare [MODE]

DOS found an error with the specified device when preparing that device for code page switching. The problem may be due to a device that does not support code pages, a device not properly prepared for code page switching, a device that cannot support more code pages than those already prepared, or a device with a bad or irregular font file.

Check the DEVICE command line in your CONFIG.SYS file. Make sure that the command syntax and limits for subfonts and additional code pages are all correct. Also check to see if your device supports code page switching. Consult the hardware vendor if your are unsure.

Disk error reading (or writing) FAT  
[CHKDSK]

One of your File Allocation Tables (FAT) has a defective sector in it. DOS automatically uses the other FAT.

Copy all your files onto another disk. To correct this error automatically, specify the CHKDSK /F switch.

Diskette bad or incompatible  
[DISKCOPY]

The source disk is not formatted, or was formatted incorrectly. You cannot copy it.

Disk full. Edits lost  
[Edlin]

Edlin was not able to save your file due to lack of disk space.

You should always make sure that there is enough room on the default disk to save your file before you use the Edlin E (end) command. You should also make sure that the default disk is not write-protected.

Disk unsuitable for system disk  
[FORMAT]

The Format program detected a bad track on the disk where system files should reside.

You should use this disk to store data only.

Do not specify filename(s)  
Command format: DISKCOMP d: d:[/1][/8]  
[DISKCOMP]

You specified an incorrect switch, or gave a file name in addition to a drive name.



Do not specify filename(s)  
Command format: DISKCOPY d: d:[/1]  
[DISKCOPY]

You specified an incorrect switch, or gave a file name in addition to a drive name.

Do you see the leftmost 0? (Y/N)  
[MODE]

MODE displays this message to help you align the test pattern on your screen.

Enter Y (for Yes) if you can see the leftmost 0 in the test pattern. Enter N (for No) to shift the display to the right.

Do you see the rightmost 9? (Y/N)  
[MODE]

MODE displays this message to help you align the test pattern on your screen.

Enter Y (for Yes) if you can see the rightmost 9 in the test pattern. Enter N (for No) to shift the display to the left.

Do you wish to use the maximum size for a DOS partition and make the DOS partition active (Y/N) ..... [ ]  
[FDISK]

You are formatting your hard disk.

Enter Y (for Yes) and press the <ENTER> key to format your entire hard disk as the primary DOS partition. Otherwise, enter N (for No), and press the <ENTER> key.

Does *name* specify a file name or directory name on the target (F=file D=Directory)?  
[XCOPY]

XCOPY displays this prompt if the target directory does not exist.

Enter F if the name specifies a file, or D if the target specifies a directory that does not currently exist.



(.)(..) Does not exist  
[CHKDSK]

This is an informational message from CHKDSK,  
indicating that either the . or .. directory entry  
is invalid.

DOS 2.0 or later required  
[ATTRIB][BACKUP][FC][GRAPHICS]  
[JOIN][MODE][RESTORE][SUBST]

You cannot use these utilities with 1.xx versions  
of MS-DOS.

Drive D already deleted  
[FDISK]

You tried to delete drive D, but it had already  
been deleted.

Drive deleted  
[FDISK]

You deleted a hard drive from the system.

Drive has been changed or deleted  
[FDISK]

You changed or deleted a hard drive on the system.

Drive letter must be specified  
[FORMAT]

You did not specify the drive letter for the drive  
that you want to format.

You must specify the name of the drive that you  
want to format.

Drive x: not ready  
Make sure a diskette is inserted into the drive and the door is  
closed  
[DISKCOMP][DISKCOPY]

The drive is empty, or you did not close the door  
of the disk drive.

**Drive types or diskette types not compatible**  
[DISKCOMP][DISKCOPY]

You must have the same size and type of disks to run these commands. For example, you cannot copy from a single-sided disk or a double-sided disk, or compare a high-density disk with a low-density disk.

Use FC to compare the files on the disks. To copy the disk, use COPY or XCOPY, or reformat the target disk so that it is the same type as the source disk, or use a disk of the same type.

**Duplicate file name**  
[RENAME]

You tried to rename a file to a file name that already exists, or the name you specified could not be found.

**ECHO if off (or on)**  
[MS-DOS]

This message indicates the current status of ECHO.

**End of input file**  
[Edlin]

The entire file was read into memory. If the file was read in sections, this message indicates that the last section of the file is in memory.

**Enter current Volume Label for drive x:**  
[FORMAT]

FORMAT asks you to enter the current volume label for verification before it formats the hard disk in the specified drive.

If you do not know what the volume label is, press <Ctrl-C> to abort this command, and give the VOL command for the specified drive. Then give the FORMAT command again.

## MS-DOS Messages

---

Enter new date:  
[DATE]

You must respond to this prompt when you start DOS, or when you use the DATE command.

Type the date in the format indicated by the prompt, or press <ENTER> to accept the current date.

Enter new time:  
[TIME]

You must respond to this prompt when you start DOS.

Type the time in the format indicated by the prompt, or press <ENTER> to accept the current time.

Entry error  
[Edlin]

The last command you typed contained a syntax error.

Retype the command with the correct syntax, and press the <ENTER> key.

Entry has a bad attribute (or link or size)  
[CHKDSK]

This message may be preceded by one or two periods that show which subdirectory is invalid.

If you have specified the /F switch, CHKDSK tries to correct the error automatically.

Error during read of Font file  
[MODE]

DOS found an error when it tried to read the font file for the code page specified.

Error in country command  
[MS-DOS]

You used the incorrect syntax for the COUNTRY command in your CONFIG.SYS file.

For the correct syntax of this configuration command, refer to Appendix B in the *MS-DOS User's Guide* (Order No. HU94).

Error in .EXE file  
[MS-DOS]

The .EXE file that you asked DOS to load has an invalid internal format.

You cannot run this program. Check to make sure that you are using the correct version of MS-DOS.

Error opening log file  
[BACKUP]

DOS cannot open the backup log file.

Check the drive and path specified with this command. Remember that the log file cannot be located on the target drive. If you did not specify a file name for the log, the error occurred when DOS tried to open and create BACKUP.LOG on the source disk.

Error reading/writing partition table  
[FORMAT]

FORMAT could not read or write the partition table.

Run FDISK on the disk, and format it again.

Error found, F parameter not specified  
Corrections will not be written to disk  
[CHKDSK]

CHKDSK found errors on the disk. If you have not specified the /F switch, CHKDSK continues printing messages, but does not correct the errors.

Run CHKDSK with the /F switch to correct the problems encountered by the CHKDSK command.



Errors on list device indicate that it may be off-line. Please check it.

[PRINT]

Your printer is not turned on.

Error trying to open backup log file  
Continuing without making log entries

[BACKUP]

You specified the BACKUP /L switch, but BACKUP could not create the backup log file.

Error writing to device

[MS-DOS]

You tried to send too much data to a device. DOS was unable to write the data to that device.

EXEC failure

[MS-DOS]

DOS either found an error when reading a command, or the FILES command in the CONFIG.SYS file is set too low.

Increase the value of the FILES command in the CONFIG.SYS file, and restart DOS.

Extended DOS partition already exists

[FDISK]

You cannot create another extended DOS partition.

Extended DOS partition created

[FDISK]

You have created an extended DOS partition on your hard disk.

Extended DOS partition deleted

[FDISK]

You have deleted an extended DOS partition from your hard disk.

Failure to access code page font file  
[MODE]

DOS cannot open the font file for the specified code page.

Check to see that you typed the font file name, and its pathname correctly. Also, check the CONFIG.SYS file to see that the device driver for this device is properly installed. If the CONFIG.SYS file is incorrect, correct it, and restart DOS before retyping the MODE command.

Failure to access COUNTRY.SYS  
[SELECT]

DOS cannot open the COUNTRY.SYS file.

Check to see that your path points to the directory in which COUNTRY.SYS resides. Then, retype the command.

Failure to access device: xxx  
[MODE]

You are trying to specify a code page for a particular device, but DOS cannot access the device listed.

Retype the command using an existing device. Make sure you are typing the device name correctly.

Failure to access KEYBOARD.SYS  
[SELECT]

DOS cannot open the KEYBOARD.SYS file.

Be sure KEYBOARD.SYS exists on your source disk.

Fastopen already installed  
[FASTOPEN]

FASTOPEN is already installed on the system.

## MS-DOS Messages

---

### Fastopen installed [FASTOPEN]

This message acknowledges that you have just installed FASTOPEN.

### FCB unavailable reading (or writing) drive x: [MS-DOS device error]

An unusual error has occurred. An experienced programmer is usually required to fix this error condition.

Enter R (for Retry), or A (for Abort).

### fc: cannot open *filename*-No such file or directory [FC]

One of the files that you specified doesn't exist.

Check the directory for the correct file name.

### fc: incompatible switches [FC]

You have specified switches that are not compatible (for example, /B and /L).

You should not combine binary and ASCII comparison switches.

### fc: no differences encountered [FC]

The files are the same.

### fc: out of memory [FC]

You do not have enough memory to perform the comparison.

File allocation table bad  
[MS-DOS]

The disk may be defective.

Run CHKDSK /F to check the disk.

File allocation table bad drive x:  
[CHKDSK]

This message indicates that the disk was not formatted, or was formatted improperly. It could also mean that an operating system other than DOS is on the disk.

Run CHKDSK /F to check the disk. If this message appears again, reformat the disk.

File *filename* canceled by operator  
[PRINT]

DOS displays this message when you specify the /T switch with the PRINT command.

File cannot be converted  
[EXE2BIN]

The input file is not in the correct format.

File cannot be copied onto itself  
[COPY][REPLACE][XCOPY]

The source file name you specified is the same as the target file name.

File creation error  
[MS-DOS][Edlin][RESTORE][XCOPY]

You tried to add a new file name or replace a file that already exists in the directory, or there was not enough space for the file. If the file already exists, it is a read-only file, and cannot be replaced. This error message also occurs if the root directory is full, out of files, or if the file name is the same as a volume or directory, or a hidden (or system) file.



File is READ-ONLY  
[Edlin]

The file is designated read-only. You cannot change it.

File name must be specified  
[Edlin]

You did not specify a file name when you started Edlin.

Type the Edlin command, followed by a file name.

File not found  
[CHKDSK][Edlin][FC][FIND][PRINT]  
[RECOVER][RENAME][XCOPY]

DOS could not find the file that you specified, or you tried to rename a file with a name already in the directory.

Check to see that you entered the file name correctly.

File not in PRINT queue  
[PRINT]

The file that you specified was not in the print queue, and therefore cannot be removed.

Check to see that you entered the file name correctly.

Files cannot be added to this diskette  
Unless the PACK (/P) switch is used  
Set the switch (Y/N)?  
[BACKUP]

The target disk does not have enough room for any of the files on the source disk, without dividing them across the disks.

If you do not want to divide a file across disks, enter N (for No). If your files are larger than will fit on one diskette, enter Y (for Yes).

\*\*\* Files were backed up at *time* on date \*\*\*  
[RESTORE]

This is an information message only.

FIND: Access denied  
[FIND]

You cannot access the file.

Make sure that the disk is not write-protected,  
read-only, or locked.

FIND: File not found  
[FIND]

DOS could not find the file that you specified.

Make sure you have typed the file name correctly.

FIND: Invalid number of parameters  
[FIND]

You specified either too many or too few options in  
the command line.

FIND: Invalid parameter  
[FIND]

One of the switches you specified is incorrect.

FIND: Read error in *filename*  
[FIND]

The FIND command could not read the specified file.

FIND: Syntax error  
[FIND]

Check to make sure that you have typed the command  
correctly.

First cluster number is invalid,entry truncated  
[CHKDSK]

The file directory entry contains an invalid pointer to the data area. If you specified the /F switch, the file is truncated to a zero-length file.

FIRST diskette bad or incompatible  
[DISKCOMP]

DISKCOMP cannot recognize the format on the source disk.

Run CHKDSK to help you identify the problem.

Fixups needed - base segment *hex*:  
[EXE2BIN]

The source (.EXE) file contained information indicating that a load segment is required for the file.

Specify the absolute segment address where the finished module is to be located.

Font File contents invalid  
[MODE]

DOS cannot use the contents of the font file specified.

Make sure you are typing the name of the font file correctly. Retype the command. If this message is displayed again, your font file may have been altered or corrupted. Recopy this file from the master MS-DOS diskette. Type the command again. This error may also cause existing selected code pages to be undefined. Use the MODE command to prepare these code pages again, and to refresh them.

For cannot be nested  
[MS-DOS]

You cannot nest FOR commands in a batch file.

Format another (Y/N)?  
[FORMAT]

FORMAT displays this message when it has finished formatting a disk.

Enter Y (for Yes) to format another disk, or enter N (for No) to end formatting. If you accidentally enter Y, you can abort the format by typing <Ctrl-C> in response to the message "Strike any key."

Format complete  
[FORMAT]

FORMAT displays this message when it has finished formatting the disk in the specified drive.

Format failure  
[FORMAT]

DOS could not format the disk. This message is usually displayed with an explanation as to why the command failed.

Format not supported on drive x:  
[FORMAT]

You cannot use FORMAT to format this drive.

You may have specified device parameters that your computer cannot support.

Formatting while copying  
[DISKCOPY]

DISKCOPY displays this message if the target disk has never been formatted.

General failure reading (or writing) drive x:  
[MS-DOS device error]

An unusual error has occurred. An experienced programmer is usually required to fix this error condition.

Enter R (for Retry) or A (for Abort).

Graftabl needs DOS version 2.0 or later  
[GRAFTABL]

You cannot use GRAFTABL with 1.xx versions of MS-DOS.

Graphics characters already loaded  
[GRAFTABL]

The GRAFTABL command displays this message if you have already loaded the table of graphics characters into memory.

Graphics characters loaded  
[GRAFTABL]

The GRAFTABL command displays this message after it loads the table of graphics characters into memory.

Hardware code pages:  
Prepared code pages:  
[MODE]

This message lists the current code pages prepared for the device specified.

Has invalid cluster, file truncated  
[CHKDSK]

The file directory entry contains an invalid pointer to the data area. If you specified the /F switch, the file is truncated to a zero-length file.

Head: *hhh* Cylinder: *ccc*  
[FORMAT]

FORMAT displays the head and cylinder number of the track currently being formatted.

Illegal device name  
[MODE]

Your computer does not recognize this device name.



Incompatible system size  
[SYS]

The system files occupy more space on the source disk than is available on the target disk.

You cannot use the SYS command to transfer the system files to this disk.

Incorrect APPEND Version  
[MS-DOS]

You are not using the MS-DOS 3.3 APPEND command. You are using another, incompatible version.

Incorrect DOS Version  
[APPEND][ATTRIB][BACKUP][CHKDSK][DISKCOMP]  
[DISKCOPY][Edlin][FC][FIND][FORMAT][GRAPHICS]  
[JOIN][KEYBxx][LABEL][MODE][MORE][PRINT][RECOVER]  
[REPLACE][RESTORE][SHARE][SORT][SUBST][SYS][TREE]  
[XCOPY]

Some DOS utilities do not run on older versions of the operating system, and many are written to run only on the exact version of MS-DOS that they were created for.

You must use the correct version of MS-DOS to run this command.

Incorrect DOS Version, use DOS 2.00 or later  
[LINK]

You specified either too many or too few options in the command line.

Incorrect parameter  
[ASSIGN][SHARE]

One of the options you specified is incorrect.

Infinite retry on parallel printer timeout  
[MODE]

Your printer is probably offline, or not ready.

If your printer appears to be ready, you may have to press <Ctrl-Alt-Del> to reset the computer.

Insert backup diskette *n* into drive *x*:  
[BACKUP][RESTORE]

This message prompts you for the *n*th backup disk.

Put the next disk into the specified drive. Be sure to label each backup disk in the appropriate order for use when restoring the files.

Insert destination disk in drive *x*: and strike any key when ready  
[SYS]

This message appears when you are using SYS to transfer the operating system with a single disk drive.

You should insert a disk in the appropriate drive and press any character or number key to begin processing.

Insert diskette for drive *x*: and strike any key when ready  
[MS-DOS]

The message appears when DOS is copying and formatting.

Insert a disk in the appropriate drive, and press any character or number key to begin processing.

Insert diskette with batch file and press any key when ready  
[MS-DOS]

The disk containing your batch file is not in the drive you originally specified.

Reinsert the disk that contains the batch file in the appropriate drive.

Insert DOS diskette in drive *x*: and strike ENTER when ready  
[FORMAT]

You typed the FORMAT /S command, but the disk in the default drive does not contain DOS system files.

Insert a disk with the files IO.SYS and MSDOS.SYS in the drive specified, and press any key.

Insert FIRST diskette into drive x:  
[DISKCOMP]

This message prompts you for the first disk that you want to compare.

Insert last backup diskette in drive x:  
Strike any key when ready  
[BACKUP]

This message prompts you for the final backup disk.

After you have put the final backup disk into the drive specified, press any alphanumeric key to continue the backup process.

Insert restore target diskette into drive x:  
[RESTORE]

RESTORE displays this prompt if you are restoring files to a diskette.

Put the target disk into the specified drive.

Insert SECOND diskette into drive x:  
[DISKCOMP]

This message prompts you for the disk that you want to compare with the first disk.

Insert source disk  
[BACKUP]

This message prompts you to put the source disk into the drive.

Insert SOURCE diskette in drive x:  
[DISKCOPY]

This message prompts you to put the disk to be copied into the specified drive.

Insert system diskette in drive x: and strike any key when ready  
[SYS]

SYS needs a disk from which to read the IO.SYS and MSDOS.SYS files

Insert a system disk into the specified drive and press any character or number key to start the copy process.

Insert TARGET diskette into drive x:  
[DISKCOPY]

DISKCOPY displays this message to prompt you to place the target disk into the specified drive. If your computer has one diskette drive, this message prompts you to put the proper disk into the drive.

Insufficient disk space  
[MS-DOS][REPLACE][SORT][XCOPY]

The disk is full and does not contain enough room to perform the specified operation.

Insufficient memory for system transfer  
[FORMAT]

Your memory configuration is insufficient to transfer the DOS system files IO.SYS and MSDOS.SYS with the FORMAT /S switch

Insufficient room in root directory.  
Erase files in root and repeat CHKDSK  
[CHKDSK]

CHKDSK always recovers lost files into the root directory. In this case, your root directory is full

Delete some files in your root directory, or move them to another directory to make room for the lost files.



**Intermediate file error during pipe**  
[MS-DOS]

The pipe operation uses temporary files on the disk that are deleted automatically once the piping process is complete. An error has occurred in one of these files.

Make sure that there is enough room on the disk for the temporary file, and that the disk is not write-protected. Try the command again.

**Internal error**  
[FC][MODE][SHARE]

This message indicates an error in the utility.

**Internal stack overflow**  
System halted  
[MS-DOS]

The system tried to use more stacks than were available. This caused a series of hardware interrupts and halted the system.

Restart DOS. Edit your CONFIG.SYS file and allocate more stack resources. For more information, refer to Appendix B in the *MS-DOS User's Guide* (HU94).

**Invalid argument**  
[BACKUP][FC][RESTORE]

You have specified an invalid argument.

Refer to Section 3 for the correct syntax of the command, and try again.

**Invalid baud rate specified**  
[MODE]

You have specified an incorrect baud rate. Valid choices are 110, 150, 300, 600, 1200, 2400, 4800, 9600, and 19200.

You must specify at least the first two digits of the baud rate.



Invalid characters in volume label  
[FORMAT][LABEL]

The volume label should only contain up to 11 alphanumeric characters.

Invalid code page specified  
[CHCP]

You selected an invalid code page number.

Retype the command with the correct code page.

Invalid COMMAND.COM  
Insert COMMAND.COM disk in default drive and strike any key when ready  
[MS-DOS]

The program you have just run used up almost all of available memory. DOS must now reload the COMMAND.COM file from disk. However, either DOS cannot find COMMAND.COM on the disk, or the copy it has found is the incorrect version.

Insert a disk that contains a copy of COMMAND.COM into the default drive (it must be the same version with which you started DOS).

Invalid country code  
[MS-DOS]

In your CONFIG.SYS file you have specified a country number that is not in the table of files configured in this version of MS-DOS. Country codes must be in the range from 1 to 99, and are set by your computer manufacturer.

Invalid country code or code page  
[MS-DOS]

DOS found an invalid country code or code page number in your CONFIG.SYS file.

**Invalid current directory**  
[CHKDSK]

You disk has an invalid directory on it.

You may be able to recover some of the files on this disk by copying them with the COPY command. Otherwise, you must replace the disk.

**Invalid date**  
[DATE][XCOPY]

You specified an invalid date in response to the date prompt.

Enter a valid date. Refer to Section 3 for the proper syntax of the DATE command.

**Invalid Date/Time**  
[BACKUP]

You specified an invalid date with one of the BACKUP command switches.

Refer to Section 3 for the proper syntax of the BACKUP command, and try the command again.

**Invalid device**  
[MS-DOS]

The device specified was not AUX, CON, NUL, or PRN.

**Invalid device parameters from device driver**  
[FORMAT]

Format displays this message when the number of hidden sectors is not evenly divisible by the number of sectors per track (that is, the partition does not start on a track boundary). This might happen if you tried to format a hard disk that was previously formatted with MS-DOS 2.x without first running FDISK, or if you have set the device driver parameters incorrectly.

Check the CONFIG.SYS file for incorrect DEVICE or DRIVPARM command.

**Invalid directory**  
[MS-DOS]

The directory you specified either does not exist,  
or is invalid.

Check to see that you entered the directory name  
correctly.

**Invalid disk change reading (or writing) drive x:**  
[MS-DOS device error]

You changed the disk in a drive when you were not  
supposed to.

Place the diskette back in the drive, and enter R  
(for Retry).

**Invalid drive in search path**  
[MS-DOS]

The drive does not exist.

**Invalid drive or filename**  
[Edlin][RECOVER]

You did not type a valid drive name or file name.  
Enter a valid drive name or file name.

**Invalid drive specification**  
[BACKUP][CHKDSK][DISKCOMP][DISKCOPY][FORMAT][LABEL]  
[PRINT][REPLACE][RESTORE][SYS][TREE][XCOPY]

The drive is incorrect, or does not exist.

Enter a valid drive name.

**Invalid environment size specified**  
[COMMAND]

You gave an invalid number of bytes with the /E  
switch.

You must specify a number between 160 and 32,768  
(bytes).

**Invalid keyboard code specified**  
[KEYB]

You selected an invalid keyboard code with the KEYB command.

Retype the command with the correct keyboard code.

**Invalid language specified**  
[KEYB]

You typed an invalid keyboard code with the KEYB command.

Refer to the KEYB command in Section 3 for a list of valid keyboard codes. Retype the command using a valid keyboard code.

**Invalid number of parameters**  
[ATTRIB][BACKUP][FC][FIND][RECOVER][RESTORE][XCOPY]

Either you did not specify an option or string, or you specified the wrong number of options in the command line.

**Invalid parameter(s)**  
[BACKUP][CHKDSK][DISKCOMP][DISKCOPY][Edlin][FIND]  
[FORMAT][JOIN][MODE][PRINT][REPLACE][RESTORE][SORT]  
[SUBST][SYS][TREE][XCOPY]

One of the switches you specified is incorrect, or does not exist.

Refer to Section 3 to make sure you are using the correct switches.

**Invalid path, not directory, or directory not empty**  
[MS-DOS]

You are unable to remove the directory requested for one of the specified reasons.

Invalid path (or file not found)

[ATTRIB][BACKUP][COPY][RESTORE][TREE][XCOPY]

You have entered a pathname or file name that does not exist.

Enter a valid pathname or file name with the command.

Invalid path or parameter

[APPEND]

You specified a file or directory that does not exist.

Enter a valid pathname or file name with the APPEND command.

Invalid signature in COUNTRY.SYS file

[SELECT]

SELECT reads the COUNTRY.SYS file to verify the country code. SELECT quits if it cannot find the proper file header or a specific country code.

Invalid signature in KEYBOARD.SYS file

[SELECT]

SELECT reads the KEYBOARD.SYS file to verify the keyboard code. SELECT quits if it cannot find the proper file header or a specific keyboard code.

Invalid STACK parameter

[MS-DOS]

The syntax of the STACK command in your CONFIG.SYS file includes an invalid parameter.

Refer to Appendix B in the *MS-DOS User's Guide* (HU94), for the correct syntax of the STACK configuration command.



Invalid sub-directory entry  
[CHKDSK]

The subdirectory that you specified either does not exist, or is invalid.

Check to see that you typed the subdirectory name correctly.

Invalid syntax  
[MS-DOS]

You used the incorrect syntax when typing a command.

Refer to Section 3 for the correct syntax of a DOS command.

Invalid syntax on DISPLAY.SYS code page driver  
[MS-DOS]

You used the incorrect syntax when you typed the DEVICE command in your CONFIG.SYS file to load DISPLAY.SYS.

Refer to Appendix B in the *MS-DOS User's Guide* (Order No. HU94), for the correct syntax of DEVICE. Also refer to Appendix C in the *MS-DOS User's Guide*, for information about the DISPLAY.SYS installable device driver.

Invalid syntax on PRINTER.SYS code page driver  
[MS-DOS]

You used the incorrect syntax when you typed the DEVICE command in your CONFIG.SYS file to load PRINTER.SYS.

Refer to Appendix B in the *MS-DOS User's Guide* (Order No. HU94), for the correct syntax of DEVICE. Also refer to Appendix C in the *MS-DOS User's Guide*, for information about the PRINTER.SYS installable device driver.

Invalid time  
[TIME]

You specified an invalid time.

Refer to Section 3 for the correct syntax, and type the command again.

Invalid Volume ID  
[FORMAT]

FORMAT displays this message if you enter a volume label that does not match the label on the hard disk you want to format. It then quits the format process.

Use the VOL command to find out what the volume label for the hard disk is, then try the command again.

Invalid working directory  
Process cannot continue  
[CHKDSK]

The current directory of the disk being checked is damaged and unusable.

x is not a choice, Please enter y-z  
[FDISK]

You tried to select an invalid option x.

Select a valid option from the range shown (y-z).

KEYB has not been installed  
[MS-DOS]

No alternate keyboard code has been installed for your system.

If you want to use a keyboard code other than the default U.S. (QWERTY) keyboard, use the KEYB command to install it.

Label not found  
[MS-DOS]

Your batch file contains a GOTO command to a nonexistent label.

Last backup diskette not inserted  
Insert last backup diskette in drive x:  
Strike any key when ready  
[BACKUP]

This message prompts you for the final backup disk.

After you have put the final backup disk into the drive specified, press any alphanumeric key to continue the backup process.

\*\*\* Last file not backed up \*\*\*  
[BACKUP]

BACKUP could not back up the last file on the disk. This message may occur if there is no more room on the target disk. It may also occur if there was an error in the source file, or on the target disk.

You may have to back up this file separately to another disk.

Line too long  
[Edlin]

During an Edlin R (replace) command, the string given as the replacement caused the line to expand beyond the limit of 253 characters.

Divide the long line into two lines, and retry the R command.

List output is not assigned to a device  
[PRINT]

When you first type the PRINT command, DOS asks you what device you want to specify as a printer. This message appears if PRINT is set up for a device that does not exist.

Lock violation reading (or writing) drive x:  
[MS-DOS device error]

A program tried to access part of a file that another program was using.

Enter A (for Abort), or wait awhile and enter R (for Retry).

x lost cluster(s) found in y chains  
Convert lost chains to files (Y/N)?  
[CHKDSK]

CHKDSK displays this message if it finds information on the disk that is not allocated properly in the disk's File Allocation Table (FAT).

If you enter Y (for Yes) in response to this prompt, CHKDSK recovers the lost blocks it found when checking the disk. CHKDSK then creates a proper directory entry and a file for each lost chain with the file name of the form: FILENNN.CHK. If you did not specify the /F switch, CHKDSK displays: "x bytes would be freed." If you enter N (for No) CHKDSK frees the lost blocks so that they can be reallocated and does not recover any data that was in those lost blocks. If you did not specify the /F switch, CHKDSK does nothing.

Logging to file x  
[BACKUP]

The BACKUP command is writing a backup log to the file specified.

Logical DOS drive created, drive letters changed or added  
[FDISK]

You have created or revised one or more logical drives.

LPTx: not redirected  
[MODE]

MODE could not redirect the parallel printer port.

Check to see that you have specified the proper options.

LPTx: redirected to COMx:  
[MODE]

Output on the parallel printer port is now sent to this asynchronous communications port.

LPTx: set for 80  
[MODE]

The parallel printer port has been set for 80 columns.

LPTx: set for 132  
[MODE]

The parallel printer port has been set for 132 columns.

Maximum available space for partitions is xxx cylinders  
[FDISK]

This is an informational message.

Maximum number of logical DOS drives installed  
[FDISK]

You have installed the maximum number of logical DOS drives allowed by DOS. You may not create any more logical DOS drives.

Memory allocation error.  
Cannot load MS-DOS, system halted  
[MS-DOS]

Restart DOS.

If this error persists, make a new copy of the MS-DOS disk from your backup copy of the system disk.



Missing from the file is either the device ID or the code page  
[MODE]

The code page specified is not supported in the code page information (.CPI) file, or the .CPI file does not support the printer specified.

For a list of valid CPLIST values in the MODE command, refer to Section 3.

MODE *fff* code page function complete  
[MODE]

This message is informational only.

--More--  
[MORE]

Press the space bar to view more of the file or directory.

MORE: Incorrect DOS version  
[MORE]

The MORE command does not run on MS-DOS versions before 2.0

Must specify COM1, COM2, COM3, or COM4  
[MODE]

You must specify a serial port.

Must specify destination line number  
[Edlin]

You did not specify the destination line number for an Edlin C (copy) or M (move) command.

Retype the command with a destination line number.

Must specify ON or OFF  
[MS-DOS]

The command requires either an ON or an OFF argument.

**Name of list device [PRN]:**  
[PRINT]

This prompt appears the first time that PRINT is run and the /D switch is not specified.

You can specify the name of any valid device, which then becomes the PRINT output device. If you press the <ENTER> key, DOS uses the default list device PRN.

**New file**  
[Edlin]

Edlin prints this message if it does not find a file with the name you specified.

If you are creating a new file, ignore this message. If you do not intend to create a new file, check to see that you have correctly typed the name of the file that you want to edit.

**NLSFUNC already installed**  
[NLSFUNC]

NLSFUNC stays resident in memory once it is initialized. You have already loaded it into memory.

**No Append**  
[APPEND]

No paths have been appended.

If you would like to append a path for data files, use the APPEND command.

**No appended directories**  
[APPEND]

You did not specify a path with the APPEND command.

**No code page has been selected**  
[CHCP]

No code pages have been selected for the system.

To select a code page, use the CHCP command.

## MS-DOS Messages

---

No COM: ports  
[MODE]

Your computer does not have an asynchronous communications (serial) port.

No files added (or replaced)  
[REPLACE]

The REPLACE command did not add or replace any files.

No files found *filename*  
[REPLACE]

REPLACE could not find matching source or target files.

No free handles.  
Cannot start COMMAND.COM, exiting  
[MS-DOS]

Restart DOS.

If this messages recurs, increase the FILES command value in the CONFIG.SYS file.

No logical drive defined  
[FDISK]

There are no logical drives defined for your system.

No paper error writing device *dev*  
[MS-DOS device error]

The printer is either out of paper or not turned on.

No path  
[PATH]

You typed PATH and pressed the <ENTER> key to find out what your search path is, but you did not set a command search path.

No primary DOS partition to delete  
[FDISK]

You have selected the FDISK option to delete your primary DOS partition, but that partition does not exist.

No room for system on destination disk  
[SYS]

There is not enough room for the system files on the target disk.

Delete some files to make room for the system files, or use another disk. You may need to reformat the disk to put the system on it.

No room in directory for file  
[Edlin]

You tried to create or save a file to the root directory, but the directory is either full, or you specified an invalid disk drive or file name.

Check the command line that you used to start Edlin for an invalid file name or disk drive entry. If your command contains no invalid entries, you should run the CHKDSK program for the specified disk drive. If the status report shows that the disk directory is full, and if there is still enough memory left on the disk, you may be able to create the file in a subdirectory. (This is because subdirectories are not limited in size as is the root directory.) Otherwise, remove the disk and replace it with another formatted disk.

No room in root directory  
[LABEL]

There is not enough room in the root directory for a volume label.

Delete or move some of the files from the root directory to make room for the volume label.

No source drive specified  
[BACKUP]

You must specify a source drive.

No space left on device  
[BACKUP][FC][RESTORE]

You cannot back up or restore any more files, and you cannot send any more output from a file comparison to your disk because the target disk is now full.

You should probably delete some of the files on the disk to make more room.

No space to create logical drive  
[FDISK]

You are trying to create a logical drive, but there is no space available to do so.

No sub-directories exist  
[TREE]

You have specified the /S switch, but the directory does not contain subdirectories.

No such file or directory  
[BACKUP][FC][RESTORE]

One or more of the files or directories that you specified does not exist.

No target drive specified  
[BACKUP]

You must specify a target drive for this command.

No version of Graphic Character Set Table is loaded  
[GRAFTABL]

For information only.



Non-DOS disk error reading (or writing) drive x:  
[MS-DOS device error]

DOS does not recognize the disk format because the disk is missing information or contains another operating system.

Run the CHKDSK command to correct the problem.  
(Refer to Section 3 for information about CHKDSK.)  
If running CHKDSK does not solve the problem,  
reformat the disk by using the FORMAT command, even  
though this destroys all of the files on the disk.

Non-standard version of Graphic Character Set Table is already  
loaded  
[GRAFTABL]

DOS cannot recognize the current table of graphics  
characters because it has been modified since it  
was loaded.

Non-system disk or disk error  
Replace and strike any key when ready  
[FORMAT][SYS]

Replace the disk with the proper disk and press any  
alphanumeric key to continue.

\*\*\* Not able to back up (or restore) file \*\*\*  
[BACKUP]

This message may occur if there was an error in the  
source file or on the target disk.

Use the CHKDSK command on the source disk to try  
and determine the problem.

Not a graphics printer file  
[GRAPHICS]

The file you are printing does not contain  
graphics.

## MS-DOS Messages

---

### Not enough memory [JOIN][SHARE][SUBST]

There is not enough memory for DOS to run the command.

### Not enough room to merge the entire file [Edlin]

There was not enough room in memory to hold the file during an Edlin T (transfer) command.

Free some memory by writing some files to a disk, or by deleting some files before transferring this file.

### Not found [Edlin]

You specified an Edlin S (search) or R (replace) command that was unable to find a further occurrence of the specified search or replace string.

### Not ready error reading (or writing) drive x: [MS-DOS device error]

The device (usually a drive or printer) specified in the error message is not ready to accept or transmit data.

This often happens when the disk drive door is open. If this is the problem, close the door and enter R (for Retry), or check to see if the printer is on and ready to print.

### O.K.? [Edlin]

This prompt occurs during Edlin S (search) or R (replace) command processing.

If you press any key except Y (for Yes) or the return key, the search or replace process continues.

One or more CON code pages invalid for given language  
[KEYB]

KEYB examined all prepared code pages, and has found that at least one code page is incompatible for your screen console device (CON). This is only a warning to let you know that your keyboard and screen console device are working from different code pages.

Only non-bootable partitions exist  
[FDISK]

None of the partitions left can boot DOS.

Only partitions on drive 1 can be made active.  
[FDISK]

You are trying to create an active partition on a hard disk other than the first hard disk drive. This is not allowed.

Out of environment space  
[COMMAND][MS-DOS]

There is not enough room in the program environment to accept more data.

To increase the size of the existing environment, use the /E switch with the COMMAND command or remove some of the the existing environment variables by using the SET command.

Parameters not compatible  
[FORMAT][REPLACE]

You have specified switches that cannot be used together.

Parameters not compatible with fixed disk  
[FORMAT]

You have used a switch that is not compatible with the specified drive.

Parameters not supported  
[MS-DOS][FORMAT]

You have specified parameters that DOS does not support.

Parameters not supported by Drive  
[FORMAT]

FORMAT displays this message when the device driver for this drive does not support generic IOCtl function requests.

Partition selected (x) is not bootable, active partition not changed  
[FDISK]

You are trying to change active partitions, but DOS cannot be booted from the partition selected.

Path(name) too long  
[PRINT][REPLACE][XCOPY]

The pathname you specified was too long.

You may have to change directories to use this command with files in deep subdirectories.

Path not found  
[CHKDSK][REPLACE][SUBST][XCOPY]

You specified an invalid pathname.

Press any key to begin adding (replacing) file(s)  
[REPLACE]

When you specify the /W switch, REPLACE displays this message to prompt you to start replacing files.

Press any key to begin formatting x:  
[FORMAT]

This prompt is issued before you format a disk.

Press any key to begin the format process. Or, to end this command, press <Ctrl-C>.



Press any key to begin recovery of the file(s) on drive x:  
[RECOVER]

This prompt is issued before you recover a disk or file.

Press any key to begin the recovery. Recovered files are named FILENNN.REC. To end this command, press <Ctrl-C>.

Press any key when ready...  
[DISKCOMP][DISKCOPY]

This prompt gives you time to insert the appropriate disks before copying them.

When you have inserted the disks into the appropriate drives, press any key to begin the DISKCOPY process. Or, to end this command, press <Ctrl-C>.

Previously prepared code page replaced  
[MODE]

This command changed the selected code page for a specific device by using another prepared code page.

Primary DOS partition already exists  
[FDISK]

You are trying to create a primary DOS partition, but one already exists.

If there is no space available on your hard disk, try to create an extended DOS partition instead.

Primary DOS partition created  
[FDISK]

You have successfully created a primary DOS partition on your disk.

Primary DOS partition deleted  
[FDISK]

You have deleted the primary DOS partition from your disk.



## MS-DOS Messages

---

### Printer error [MODE]

The printer is off, or is not ready to print.

### Printer lines per inch set [MODE]

MODE has set the number of lines per inch for the printer.

### PRINT queue is empty [PRINT]

There are no files waiting to be printed.

### PRINT queue is full [PRINT]

There is only room for 10 files in the list of files waiting to be printed.

You can make more room by using the PRINT /Q switch. The limit is 32 files.

### Probable non-DOS disk Continue (Y/N)? [CHKDSK]

The disk you are using is not recognized by this version of MS-DOS. The disk was either created by another system with a format that is not supported on this version of MS-DOS, or it is not an MS-DOS disk.

Do not continue processing if CHKDSK returns this message for a diskette. If this message returns for a hard disk, the information describing the characteristics of the disk to DOS has been destroyed. In this case, you can continue CHKDSK processing by typing Y (for Yes). This error may mean that the File Allocation Table (FAT) is bad and that the disk is unusable.

Processing cannot continue  
[CHKDSK]

There is not enough memory in your machine to run  
CHKDSK for this disk.

You must obtain more memory to run CHKDSK.

Program too big to fit in memory  
[MS-DOS]

You need more memory to run your application. It  
is possible that some programs you have run are  
still using some memory.

You may try to restart DOS. However, if you still  
receive this message, you need more memory.

Read error, COUNTRY.SYS  
[MS-DOS]

DOS cannot find the COUNTRY.SYS file.

Retry the command. If the same message appears,  
the COUNTRY.SYS file is probably corrupted.  
Restore the file from backup.

Read error in *filename*  
[Edlin][FIND]

DOS could not read the entire file.

Read error, KEYBOARD.SYS  
[MS-DOS]

DOS cannot read the KEYBOARD.SYS file.

Retry the command. If the same message appears,  
the KEYBOARD.SYS file is probably corrupted.  
Restore the file from backup.

Read fault error reading drive x:  
[MS-DOS]

DOS is unable to read data from the device (usually a disk drive).

Check to see that the disk is properly inserted in the drive, then enter R (for Retry).

Reading source file(s)...  
[XCOPY]

XCOPY is now reading the source files that you specified.

Reinsert diskette for drive x:  
[FORMAT]

Reinsert the disk being formatted in the indicated drive.

Replace *filename*? (Y/N)  
[REPLACE]

REPLACE displays this prompt if you specify the /W switch.

Enter Y (for Yes) to replace the existing file, or enter N (for No) if you do not want to replace the file.

Replace the file (Y/N)?  
[RESTORE]

The file that you want to restore from backup already exists on your target disk.

Enter Y (for Yes) and press the <ENTER> key to overwrite the file. Enter N (for No) and press the <ENTER> key if you don't want to replace the file on your target disk with the file from the backup disk.

Replacing *filename*  
[REPLACE]

REPLACE displays this prompt to let you know that it is replacing this file that exists on your disk.

Requested logical drive size exceeds the maximum allowable space  
[FDISK]

You are trying to create a logical drive that is larger than the space available.

Requested partition size exceeds the maximum available space  
[FDISK]

You are trying to create a partition on your hard drive that is larger than the space available.

Requested Screen Shift out of range  
[MODE]

You cannot shift the display any farther.

Resident part of PRINT installed  
[PRINT]

This is the first message that DOS displays when you issue the PRINT command. It indicates that in order to process the PRINT command with other processes, available memory has been reduced by several thousand bytes.

Resident portion of MODE loaded  
[MODE]

Part of the Mode program is now resident in memory, and available memory has been reduced by several thousand bytes.

Resident portion of NLSFUNC loaded  
[NLSFUNC]

NLSFUNC stays resident in memory once it is initialized. This informational message lets you know that you have already loaded NLSFUNC into memory.

**Restore file sequence error**  
[RESTORE]

You have restored files in the wrong order.

Insert the backup disks in the same order that they were backed up.

**\*\*\* Restoring files from drive x: \*\*\***  
**Diskette n**  
[RESTORE]

The message is displayed during the restore process.

**Resynch failed. Files are too different**  
[FC]

FC compares what can be loaded into memory. If no lines match in the portion of the files in the buffer space, FC displays this message.

**Same drive specified more than once**  
[FASTOPEN]

You tried to activate FASTOPEN for the same drive more than once. There is no need to reactivate it for the same drive.

**SECOND diskette bad or incompatible**  
[DISKCOMP]

The second disk does not contain the same format as the first disk, or DISKCOMP does not recognize the format of the second disk.

Run CHKDSK to help you identify the problem.

**Sector not found error reading (or writing) drive x:**  
[MS-DOS device error]

This error usually means that the disk has a defective spot, so that DOS cannot find the requested information on it.

Copy all files from the disk onto a good disk, and reformat the defective disk.



Sector size too large in file *filename*  
[MS-DOS]

The specified device driver loaded by CONFIG.SYS uses a sector size larger than that of any other device driver on the system.

You cannot run this device driver.

Seek error reading (or writing) drive x:  
[MS-DOS device error]

DOS is unable to locate the information on the disk.

Make sure that the disk is properly inserted in the drive, or try a different drive.

SHARE already installed  
[SHARE]

SHARE can only be installed once.

Sharing violation reading drive x:  
[MS-DOS device error]

A program tried to access a file that another program was currently using.

Enter A (for Abort), or wait awhile and enter R (for Retry).

SORT: Incorrect DOS version  
[SORT]

Sort does not run on MS-DOS versions before 2.0.

SORT: Insufficient disk space  
[SORT]

The disk is full.

SORT: Insufficient memory  
[SORT]

There is not enough memory to run the SORT program.

## MS-DOS Messages

---

### Source and target drives are the same [BACKUP][RESTORE]

You specified the same drive for the source and target disks.

### Source disk is Non-removable [BACKUP]

This is an informational message indicating that the source disk is a hard disk.

### Source does not contain backup files [RESTORE]

You are attempting to restore files from a disk that does not contain backup files.

### Source is a floppy (or hard) disk [RESTORE]

This is an informational message only.

### Source path required [REPLACE]

You did not specify a source path for the REPLACE command.

### Specified drive does not exist, or is non-removable [DISKCOMP][DISKCOPY]

You cannot compare or copy hard disk with this command.

You must specify the name of a valid diskette drive.

### Specified MS-DOS search directory bad [MS-DOS]

The SHELL command in the CONFIG.SYS file is incorrect.

Make sure that the COMMAND.COM file exists, and that DOS can find it.

**Strike a key when ready...**  
[MS-DOS]

This prompt occurs during command processing, and is always accompanied by another message. This message is also displayed if you have inserted a PAUSE command in a batch file. Usually,, DOS asks you to insert disks into appropriate drives before this prompt.

To begin command processing, press any character, any number key, the space bar, or the <ENTER> key.

**Syntax error**  
[ATTRIB][FIND][MS-DOS]

You have entered a command incorrectly.

Check to make sure you have typed the command correctly. Remember to enclose the FIND command string in quotation marks.

**System transferred**  
[FORMAT][SYS]

The system files were transferred during FORMAT or SYS command processing.

**Target cannot be used for backup**  
[BACKUP]

Either the target disk has an unrecognizable format, or it is bad.

Do not use the disk, or try to format the disk with the FORMAT command, or run CHKDSK on it to determine the problem.

**Target disk is Non-removable**  
[BACKUP]

This is an informational message that the target disk is a hard disk.

**Target diskette is write protected**  
[DISKCOPY]

The target disk either has a write-protect tab on it, or it does not have a write-protect notch.

If you want to destroy any existing information on the disk, remove the write-protect tab and give the command again. If the disk does not have a write-protect notch, you cannot use it as a target disk.

**Target diskette may be unusable**  
[DISKCOPY]

Either the target disk has an unrecognizable format, or it is bad.

Try to format the disk with the FORMAT command, or run CHKDSK on it to determine the problem.

**Target is a floppy (or hard) disk**  
[BACKUP]

This is an informational message only.

**Target is full**  
[RESTORE]

There is no more room on the target disk for restored files.

Delete some of the files on the disk to make room for these files, or use another disk.

**Target is Non-Removable**  
[RESTORE]

This is an informational message only.

Terminate batch job (Y/N)?  
[MS-DOS]

If you press <Ctrl-C> while in batch mode, DOS asks you whether or not you want to end batch processing.

Enter Y (for Yes) to end processing, or enter N (for No) to continue.

The current active keyboard table is xx with code page: yyy  
The current active CON code page is zzz  
[KEYB]

This is an informational message that shows the current keyboard code, code page for the system, and code page for the console (screen).

The last file was not restored  
[RESTORE]

There was not enough room on the target disk for the file, or the last file was bad.

Use the CHKDSK command to determine the problem.

The only bootable partition on drive 1 is already marked active  
[FDISK]

You are trying to change the active partition. The active partition must reside on the first hard disk drive on your system and must be bootable. The only bootable partition on the first hard disk drive is already the active partition.

Too many drive entries  
[FASTOPEN]

You can use FASTOPEN with up to four hard drives. You have tried to specify a fifth drive.



## MS-DOS Messages

---

### Too many files open [Edlin][LABEL]

DOS could not open the .BAK file or write the volume label due to the lack of available system file handles.

Increase the value of the FILES command in the CONFIG.SYS file.

### Too many name entries [BACKUP][FC][RESTORE][XCOPY]

DOS could not open the files that you want to compare due to the lack of available system file handles.

Increase the value of the FILES command in the CONFIG.SYS file.

### Track 0 bad - disk unusable [FORMAT]

The FORMAT command can accommodate defectors on the disk, except for those near the beginning.

You must use another disk.

### Unable to create directory [MKDIR][XCOPY]

DOS could not create the directory you specified.

Check to see that there is not a name conflict. You may have a file with the same name, or the disk may be full.

### Unable to create KEYB table in resident memory [KEYB]

DOS tried to create a country-specific table for the keyboard code specified, but failed.

Check the amount of available memory. There may not be enough memory available to create this table.

Unable to erase  
[BACKUP]

BACKUP could not erase the files on the target disk.

Check to see that the files on the backup disk are not read-only, and that the disk is not write-protected.

Unable to shift Screen  
[MODE]

MODE is unable to shift the test pattern on the screen any farther.

Unexpected DOS Error *n*  
[REPLACE]

An unexpected error *n* occurred, where *n* is the DOS error number.

Unrecognized command in CONFIG.SYS  
[MS-DOS]

There is an invalid command in your CONFIG.SYS file.

Refer to Appendix B in the *MS-DOS User's Guide* (Order No. HU94), for a list of valid statements.

Unrecognized printer  
[GRAPHICS]

You are using an invalid printer.

Check to see that you entered the command properly, or refer to Section 3 to make sure that you have specified a valid printer name.

Unrecognized printer port  
[GRAPHICS]

The printer device name that you specified was invalid.

You may need to set the printer port by using the MODE command.

Unrecoverable error in directory  
Convert directory to file (Y/N)?  
[CHKDSK]

This message is displayed if CHKDSK is unable to correct an error in a directory.

If you respond Y (for Yes), CHKDSK converts the bad directory into a file. You can then fix the directory or delete it. If you respond N (for No), you may not be able to write to or read from the bad directory.

Unrecoverable read (or write) error on drive x:  
[MS-DOS device error]

DOS is unable to read or write data to the specified device.

Make sure that the disk is properly inserted in the disk drive. Enter R (for Retry). If the error occurs again, enter A (for Abort).

usage: fc [/a][/b][/c][/l][/lb n][/w][/t][/n][/NNNN] file1 file2  
[FC]

One of the switches that you have specified is invalid.

VERIFY is off (or on)  
[MS-DOS]

This message tells you the current setting of the VERIFY command.

*nnn* version of Graphic Character Set Table is already loaded  
[MS-DOS]

You tried to load the Graphic Character Set Table with the GRAFTABL command. This table already exists in memory.

Volume in drive x: has no label  
[DIR][LABEL][VOL]

This is an informational message displayed in response to the DIR, LABEL, or VOL command.

Volume in drive x: is *filename*  
[DIR][LABEL][VOL]

This is an informational message displayed in response to the DIR, LABEL, or VOL command.

Volume label (11 characters, ENTER for none)?  
[FORMAT][LABEL]

This message is displayed when you specify the LABEL command, or the /V switch in the FORMAT command.

Type a volume label, or press the <ENTER> key to indicate that you do not want a volume label for this disk. It is a good idea, though, to specify a volume label to help you identify your disks.

WARNING, ALL DATA ON NON-REMOVABLE DISK DRIVE x: WILL BE LOST!  
Proceed with Format (Y/N)?  
[FORMAT]

This message appears when you try to format a hard disk that already contains data.

If you enter Y (for Yes), the data on the disk will be erased. If you do not want the files on your hard disk erased, enter N (for No). Copy the files to a diskette, and repeat the FORMAT command.

Warning! Data in the extended DOS partition could be destroyed.  
Do you wish to continue.....? [n]  
[FDISK]

You are trying to delete an extended DOS partition.

Be sure this is what you want to do. If you want to delete the extended DOS partition, enter Y (for Yes) and press <ENTER>. If not, the default response N is already entered. Press <ENTER>.

Warning! Data in the primary DOS partition could be destroyed.  
Do you wish to continue.....? [n]  
[FDISK]

You are trying to delete the primary DOS partition.

If you are sure you want to delete your primary DOS partition, enter Y, and press <ENTER>. If not, press <ENTER>, and DOS will not delete the partition.

Warning - directory full  
[RECOVER]

The root directory is too full for RECOVER processing.

Delete some files in the root directory to free space for the recovered files, and try the command again.

Warning! Diskette is out of sequence  
Replace diskette or continue if okay  
Strike any key when ready  
[RESTORE]

You should restore the diskettes in the order that you backed them up.

Warning! File *filename* is a hidden (or read-only) file  
Replace the file (Y/N)?  
[RESTORE]

This message asks if you want to replace a backup file that has been changed.

Enter Y (for Yes), to restore this file, or enter N (for No) if you do not want to restore the file.



Warning! Files in the target drive BACKUP (or root) directory  
will be erased  
[BACKUP]

BACKUP found files in the target drive, and you did  
not specify the /A switch to append files.

Warning! No files were found to back up  
[BACKUP]

BACKUP did not find the file that you wanted to  
restore from the backup disk.

Warning: Read error in EXE file  
[EXE2BIN]

The amount read was less than the size of the  
header. This is a warning message only.

Warning! The partition marked active is not bootable  
[FDISK]

The active DOS partition must be bootable.

Write fault error writing drive x:  
[MS-DOS device error]

DOS is unable to write data to the specified  
device.

Make sure that the disk is properly inserted in the  
disk drive. Then enter R (for Retry). If the  
error occurs again, enter A (for Abort).

Write protect error writing drive x:  
[MS-DOS device error]

You tried to write data on a write-protected disk.

If the disk has a write-protect tab on it, you must  
remove the tab before you can write on the disk.  
(You should consider first why the disk was  
write-protected.) If the disk does not have a  
write-protect notch, you cannot write on that disk.



## **GLOSSARY**

### **abort**

Premature termination of a program during execution.

### **access**

The ability to locate data in a file and change it, if necessary.

### **address**

Data is contained in the electronic devices that make up your computer's memory and the registers in its CPU. Each device is assigned a number, which is known as an "address." Your computer is able to locate data using these addresses.

### **alpha**

Alphabetic characters.

### **alphanumeric**

Alphabetic, numeric, plus other characters such as parentheses, dollar sign, etc.

### **ANSI**

American National Standards Institute. An organization that establishes standards for protocols, computer languages, etc.

### **application program**

A program that you use on your computer to perform a specific job (such as a word processing or spreadsheet program).

## Glossary

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### ASCII

American Standard Code for Information Interchange. A binary code widely accepted for use in sending and receiving character information in digital form.

### assemble

To create an object program from a symbolic language program by substituting machine operation codes for symbolic operation codes and absolute or relocatable addresses for symbolic addresses.

### assembler

A computer program that accepts routines and subroutines that have been prepared in a mnemonic language and translates them into one main program in numeric machine language. Ratio of machine language to numeric language is usually 1 to 1.

### Assembly language

The operational language used in a specific machine-oriented computer program.

### backup

1. (v): The process of duplicating data from one disk to another disk to prevent total data loss in case the original is lost or damaged. Often used to describe the process of copying from hard disk to one or more diskettes.
2. (n): A copy of a file or diskette that contains backup data.

### BASIC

1. Acronym for the programming language Beginner's All-purpose Symbolic Instruction Code. BASIC uses common English words and is relatively easy to use.
2. The computer program that translates statements made in BASIC programming language into instructions to the computer.

### binary code

A system of numbering that uses only two numbers, zero and one. For example, the ASCII letter D is represented as 01000100.

bit

Binary Unit. A switch in the CPU that is controlled by electronic impulses. A group of eight bits is called a "byte."

buffer

An intermediary storage area between two data processing storage or data handling systems with different access times or formats. An interim system to facilitate interface between two other systems. Information is held in the buffer until the computer or device is ready to process it.

byte

In your CPU, one byte represents one character and each byte is made up of eight bits.

clear

Placement of a memory device into a prescribed state, usually a state denoting zero or blank.

COBOL

Common Business Oriented Language. A high-level programming language that makes use of English language commands.

command

An instruction that tells the operating system what you want to do.

command language

A set of commands that control the overall operation of a computer system.

compile

To translate a high-level language program into a machine language or intermediate language program.

compiler

A computer program used to translate high-level, human-understandable languages into machine-oriented computer language.



## Glossary

### component

One item of a total system. For example, your keyboard is a component of your PC.

### console

The input keyboard.

### control character

A character whose occurrence in a particular context initiates, modifies, or stops an action that affects the recording, processing, transmission, or interpretation of data.

### copy

To reproduce a program or data while leaving the original information unchanged.

### CPU

Central Processing Unit.

### CR

Carriage Return or Return. A format effector that moves the active position to the first character position on the next line. You can enter a carriage return by pressing the <ENTER> key on your computer keyboard.

### cursor

The small blinking indicator on your display screen that shows you where you can enter data or commands.

### data

Any combination of letters, numbers, and symbols that is input to, or output from, the computer for storage or processing.

### default

A value or direction automatically selected by the computer unless you specify a different one.

### device

A computer peripheral or an electronic component.

directory

A list of file names kept on each disk.

disk (hard)

A thin, flat, circular piece of rigid plastic or aluminum alloy coated with magnetic material on which data is stored. Hard disks (also called "fixed" disks) are able to store much more data than a diskette.

diskette

A thin, flat piece of plastic that is coated with magnetic material and encased in a protective jacket. Data is recorded and stored on a diskette. There are generally two kinds of diskettes: those with flexible paper jackets, often called Flexible Disks, Floppy Disks, or Floppies; and those with rigid plastic covers, often called microdisks or minidisks.

disk drive

The mechanical device, contained within the computer hardware, that spins diskettes or hard disks and either reads data from them, or transfers data to them.

edit

To modify programs, data files, text files or database information by adding, deleting or changing characters, lines, records, words, etc.

editor

A utility program that performs editing operations on programs and data.

erase

In the context of a computer, to remove data from internal memory or from a disk.

encode

To put into code.

execute

To perform a computer command or run a program.

## Glossary

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### file

An identified collection of data stored on a disk or tape. A file can also refer to a body of data stored in the memory of a computer.

### format (disk/diskette)

To prepare a disk for use with a particular computer operating system.

### FORTRAN

FORMula TRANslator. A type of high-level language commonly used for the solution of engineering and scientific problems.

### function key

A push button on a computer keyboard that transmits a unique code that the computer interprets in a specific manner.

### hardware

All the physical components that make up your computer system. Examples include the keyboard, the display monitor, the system unit, or the printer.

### hexadecimal number

A one-character value represented in four bits (half a byte). The first 10 values in the system are the integers 0 through 9; the last 6 values are the letters A, B, C, D, E, F. Also called a hex number. The four bits for value 1 is 0001; the four bits for F is 1111.

### high-level language

A computer programming language that is less dependent on the limitations of a specific computer; for instance, pseudolanguages; problem-oriented languages; languages common to most computer systems, such as Pascal, FORTRAN, and COBOL.

### initialize

To originate or establish the startup state of a computer system.

### input

Data supplied to a computer or program for processing.

interface

The bringing together (in an organized manner) of entities, such as hardware, software, and a human.

KB

Kilobyte; a common measure of computer storage where K = 1024 bytes.

keyboard

A device for entering data to the computing system by pressing keys.

machine language

Instructions in binary notation that the hardware can understand and carry out. Machine language is always produced as a result of passing high-order programming language instructions through translation routines.

magnetic disk

Storage device(s) consisting of magnetically coated disks, on the surface of which data is encoded in the form of magnetic spots arranged in a manner to represent data.

main memory

Internal memory; the temporary memory that is maintained electrically in the computer.

MB

Megabyte; a common measure of computer storage where M = 1048576 bytes.

memory

The part of the personal computer that stores data. Personal computers always have some amount of internal memory capacity made up of memory chips; this amount can vary greatly.

message

1. A finite sequence of letters, digits, symbols, etc.
2. A transmitted series of words or symbols that are designed and intended to convey information.
3. A group of words, variable in length, transported as a unit; a transported item of information.



## Glossary

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### output

In electronics, the power, energy, or signal delivered by a device or system. In computer terminology, the processed data being delivered by a computer.

### Pascal

A high-level programming language named after Blaise Pascal and developed by Niklaus Wirth. It emphasizes structured programming and provides convenient data structuring facilities.

### peripheral

A device that is separate from the computer but that works in conjunction with it. A printer, keyboard, and disk drive are all examples.

### procedure

The course of action taken to solve a problem.

### program

1. (n): A list of instructions for the computer to follow in order to perform a desired operation.
2. (v): To prepare a list of instructions for the computer to follow.

### RAM

Random Access Memory. The type of internal memory of a computer where data can be written, read from, erased, or stored in any order. RAM is maintained by electrical current and makes up much of the internal memory.

### random access

A storage technique in which the time required to obtain data is independent of the location of the data most recently obtained. Contrast with Sequential Access Storage.

### restore

The process of returning data copied to a backup disk to its original location, usually a directory on a hard disk.



ROM

Read-Only Memory. Instructions that control essential operations of the computer are stored permanently in ROM. You can only read from ROM; you cannot change its contents.

sector

A portion of each of the tracks on a disk or diskette. There are usually 9 sectors per track for a 5-1/4 inch or 3-1/2 inch diskette, 15 sectors per track for a high-capacity 5-1/4 inch diskette, and 17 sectors per track for a PC hard disk.

software

The nonphysical portion of your system. Any kind of program, language, or data within the electrical circuits of a computer is software.

startup

The process of loading and initializing an operating system.

syntax

The structural format rules of a computer language that must be followed when using the language. In this manual we call it format.

system

A collection of parts or devices making an organized whole, through some form of regular interaction or interdependence.

terminal

A device for communication with a computer. A typical terminal consists of a keyboard and a printer or monitor display.

tracks

A series of concentric rings on a disk. Data can be written to or read from the tracks by the read-write head. There are 40 tracks on a 5-1/4 inch diskette, and 80 tracks on a 3-1/2 inch or a high-capacity 5-1/4 inch diskette. A PC 20 MB hard disk drive usually has 614 tracks.

## Glossary

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### variable

A factor or condition that can be changed or that changes independently.

### word

In computer terminology, a unit of data that occupies a storage location. In most digital computers, a word is composed of a group of one or more bytes.

### write

To copy from one form of storage to another, particularly from an internal storage (like the PC's internal memory) to an external or secondary storage (such as a diskette or hard disk).

### write-enable notch/tab

A small notch or tab located on an edge of most diskettes that protects the diskette's contents from being written over or erased accidentally. On a 5-1/4 inch flexible diskette, there is usually a small cutout notch which should be uncovered to allow information to be written, and covered to prevent writing to the diskette. On a 3-1/2 inch minidisk, the tab should be closed to allow writing to the diskette, and open to prevent writing.

## INDEX

- ANSI.SYS, 3-15
  - ANSI.SYS, 3-57
- APPEND, 3-16
- ASSIGN, 3-19
- ATTRIB, 3-21
- AUTOEXEC.BAT, 3-23
- BACKUP, 3-24
- Batch
  - Batch Commands (Tbl), A-10
- BREAK, 3-29
- Buffers, 3-30
- CALL, 3-31
- CD
  - CHDIR (CD), 3-34
- Characters
  - Command Characters, 6-14
- CHCP, 3-32
- CHDIR
  - CHDIR (CD), 3-34
- CHKDSK, 3-35
- CLS, 3-37
- Command, 3-38
  - Command Characters, 6-14
  - Command Delimiters, 3-10
  - Command Descriptions, 3-14
  - Command Format, 3-7
  - Command Name, 3-9
  - Command Options, 3-10
  - Command Path, 3-8
  - Command Processors, 3-4
  - Command Prompts, 6-15
  - Common Command Entry Conventions, 3-13

## INDEX

### Commands

- Batch Commands (Tbl), A-10
- Configuration Commands (Tbl), A-11
- Debug Commands (Tbl), A-15
- Edlin Commands (Tbl), A-13
- External Commands, 3-6
- Internal Commands, 3-5
- MS-DOS Commands (Tbl), A-2
- Summary of Commands, 3-14
- Types of Dos Commands, 3-4

### Common

- Common Command Entry Conventions, 3-13

COMP, 3-40

### Compatibility

- Format Compatibility, 3-101
- Parameter Compatibility, 3-103

CONFIG.SYS, 3-43

### Configuration

- Configuration Commands (Tbl), A-11

COPY, 3-44

Country, 3-49

CTTY, 3-52

DATE, 3-53

DEBUG, 3-55

- Debug Commands (Tbl), A-15

Definitions, 6-4

DEL, 3-56

### Delimiters

- Command Delimiters, 3-10

DEVICE, 3-57

DIR, 3-72

DISKCOMP, 3-74

DISKCOPY, 3-76

DISPLAY.SYS, 3-58, 3-79

## INDEX

- Divided
  - How Memory is Divided (Fig), 6-4
- DOS
  - Types of DOS Commands, 3-4
- DOSINS, 3-80
- DRIVER.SYS, 3-61, 3-81
- DRVINS, 3-82
- ECHO, 3-83
- Edlin, 3-84
  - Edlin Commands (Tbl), A-13
- EMMDRV.SYS, 3-63, 3-85
- ENHKEY, 3-86
- Entry
  - Common Command Entry Conventions, 3-13
- ERASE, 3-87
- EXE2BIN, 3-88
- EXIT, 3-89
- Extensions
  - Input File Extensions, 6-7
  - Output File Extensions, 6-7
- External
  - External Commands, 3-6
- FASTOPEN, 3-90
- FCBS, 3-91
- FDISK, 3-92
- File
  - Input File Extensions, 6-7
  - Output File Extensions, 6-7
- Files, 3-94
  - Files that Link Uses, 6-7
- FIND, 3-95



## INDEX

FOR..IN..DO, 3-97

### Format

- Command Format, 3-7
- Format, 3-8, 3-99
- Format Compatibility, 3-101

FREQ, 3-104

- FREQ Utility, D-2

GOTO, 3-105

GRAFTABL, 3-106

Graphics, 3-107

IF, 3-109

### Input

- Input File Extensions, 6-7

### Internal

- Internal Commands, 3-5

JOIN, 3-111

KEYB, 3-115

KEYBOARD.SYS, 3-114

LABEL, 3-118

LASTDRIVE, 3-120

### Line

- Method 2: command Line, 6-11

### Link

- Files That Link Uses, 6-7
- Link Messages, 6-36
- Link Options, 6-17
- Sample Link Session, 6-33
- Starting Link, 6-9
- The Link Operation (Fig), 6-3
- Using Link, 6-9

### MD

- MKDIR (MD), 3-121

### Memory

- How Memory is Divided (Fig), 6-4

## INDEX

### Messages

Link Messages, 6-36

### MKDIR

MKDIR (MD), 3-121

### MS-DOS

MS-DOS Commands (Tbl), A-2

### Name

Command Name, 3-9

### Notation

Notation Conventions, 3-11

### Options

Command Options, 3-10

Link Options, 6-17

### Output

Output File Extensions, 6-7

### Overview

Program Overview, 6-2

### Parameter

Parameter Compatibility, 3-103

### PARK, 3-139

PARK Utility, D-4

### Path

Command Path, 3-8

Path, 3-140

### PAUSE, 3-142

### PRINT, 3-143

### PRINTER.SYS, 3-64. 3-147

### Processors

Command Processors, 3-4

### Program

Program Overview, 6-2

### Prompt, 3-148

### Prompts

Command Prompts, 6-15

## INDEX

RAMDRIVE.SYS, 3-66, 3-151

RD

    RMDIR (RD), 3-165

RECOVER, 3-152

REM, 3-154

REN

    RENAME (REN), 3-155

REPLACE, 3-157

RESTORE, 3-160

RMDIR

    RMDIR (RD), 3-165

SELECT, 3-166

Session

    Sample Link Session, 6-33

SET, 3-168

SHARE, 3-170

SHELL, 3-171

SHIFT, 3-172

SMARTDRV.SYS, 3-67, 3-173

SORT, 3-174

Stacks, 3-179

SUBST, 3-180

SYS

    ANSI.SYS, 3-15, 3-57

    CONFIG.SYS, 3-43

    DISPLAY.SYS, 3-58, 3-79

    DRIVER.SYS, 3-61, 3-81

    EMMDRV.SYS, 3-63, 3-85

    KEYBOARD.SYS, 3-114

    PRINTER.SYS, 3-64, 3-147

    RAMDRIVE.SYS, 3-66, 3-151

    SMARTDRV.SYS, 3-67, 3-173

    SYS, 3-182

    VDISK.SYS, 3-68, 3-187

## INDEX

TIME, 3-183

TREE, 3-185

Utility

    FREQ Utility, D-2

    PARK Utility, D-4

VDISK.SYS, 3-68, 3-187

VER, 3-188

VERIFY, 3-189

VOL, 3-190

XCOPY, 3-191





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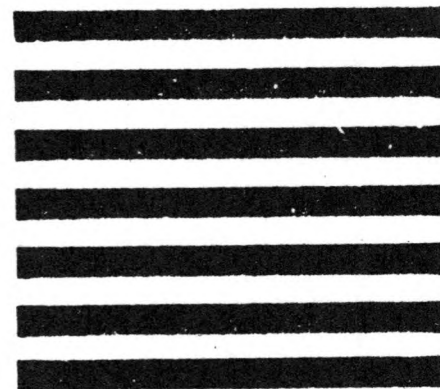
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